

FIG. 1 is a schematic diagram of a distributed commerce utility system. The system includes a user 95, a device 100, a network 102, a server 104, a database 106, a communication system 110, and a satellite 112. The user 95 is shown interacting with the device 100, which is connected to the network 102. The network 102 is connected to the server 104, which is connected to the database 106. The server 104 is also connected to the communication system 110, which is connected to the satellite 112. The satellite 112 is connected to the network 102 via a communication link 150. The network 102 is also connected to a cloud 75, which is labeled "DISTRIBUTED COMMERCE UTILITY".

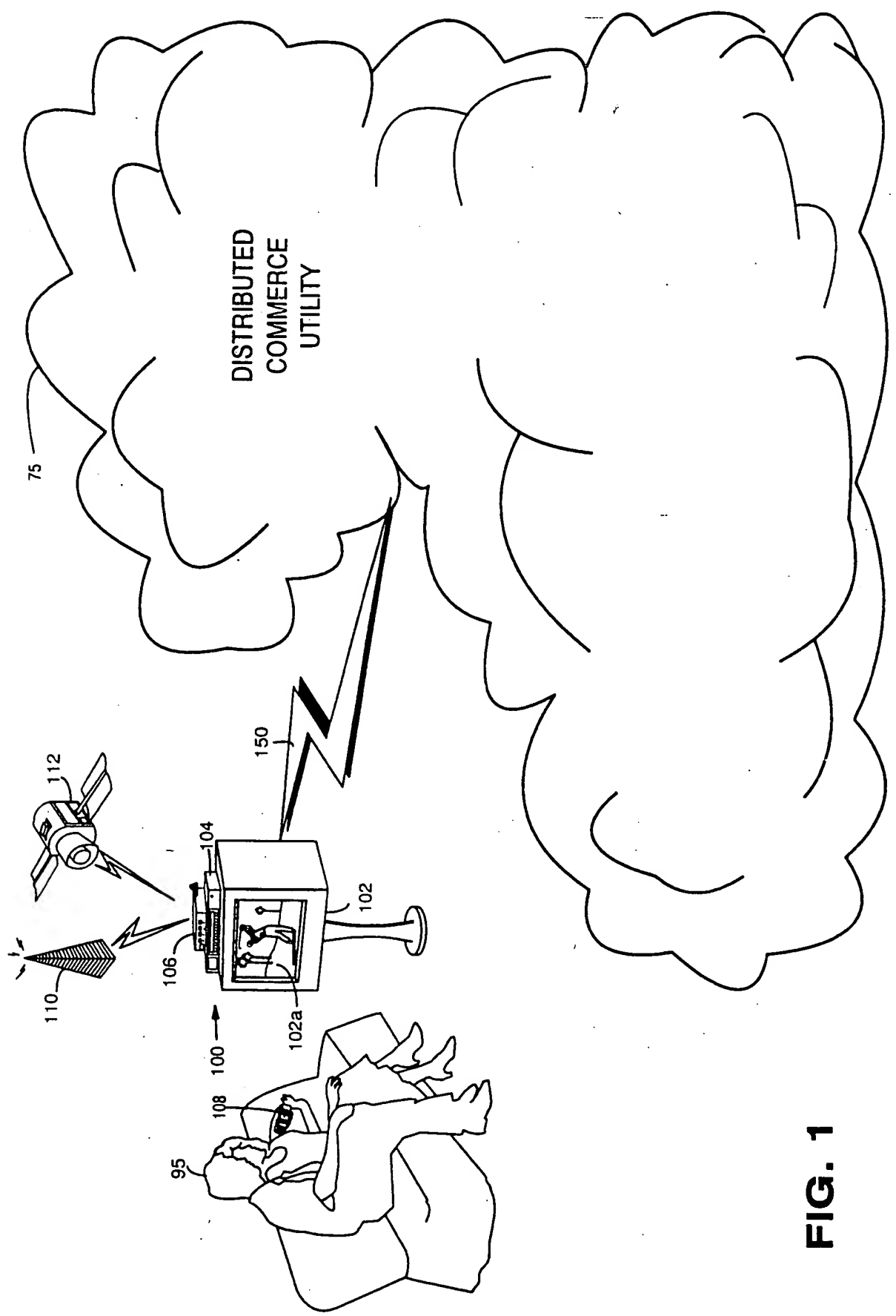
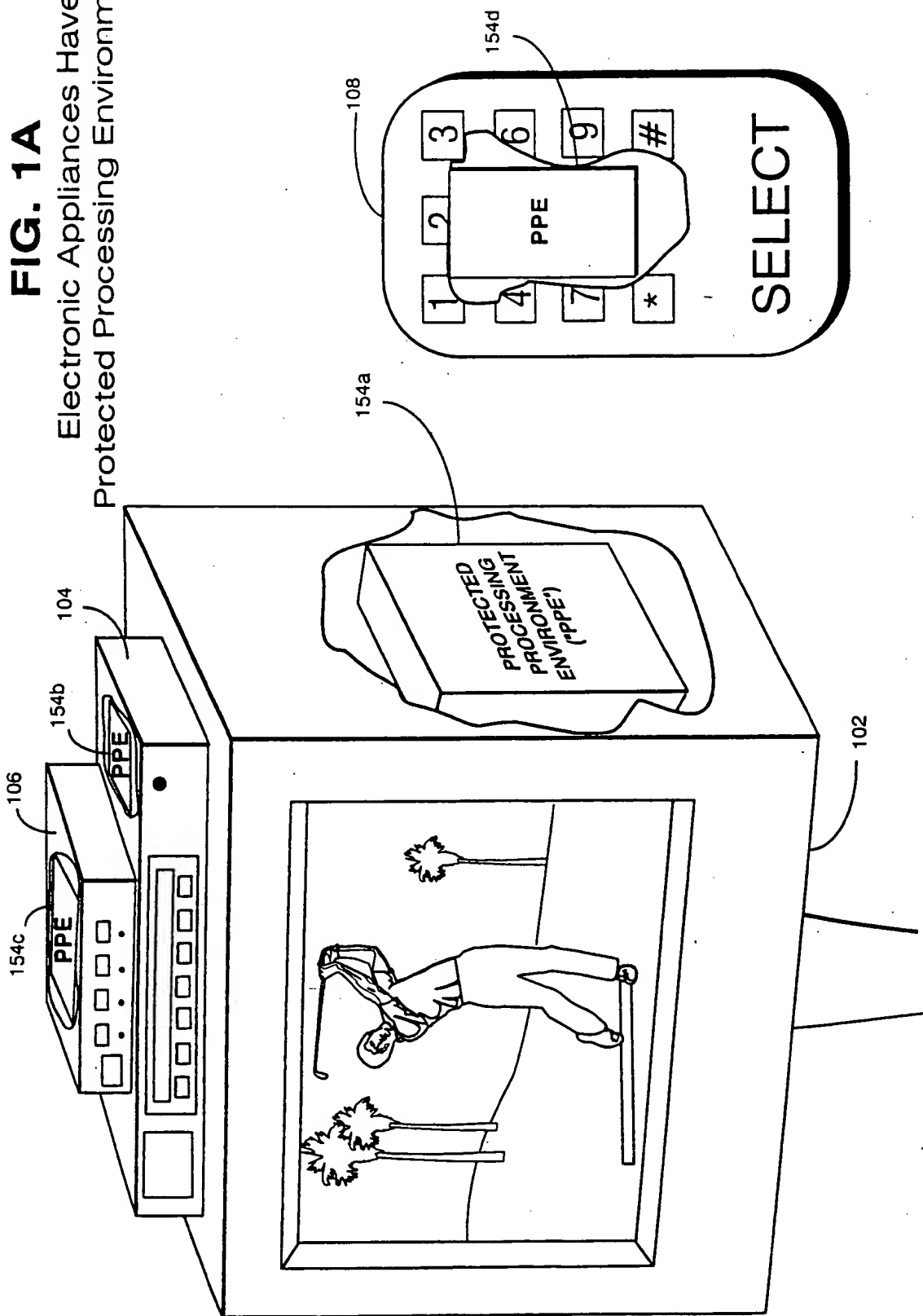
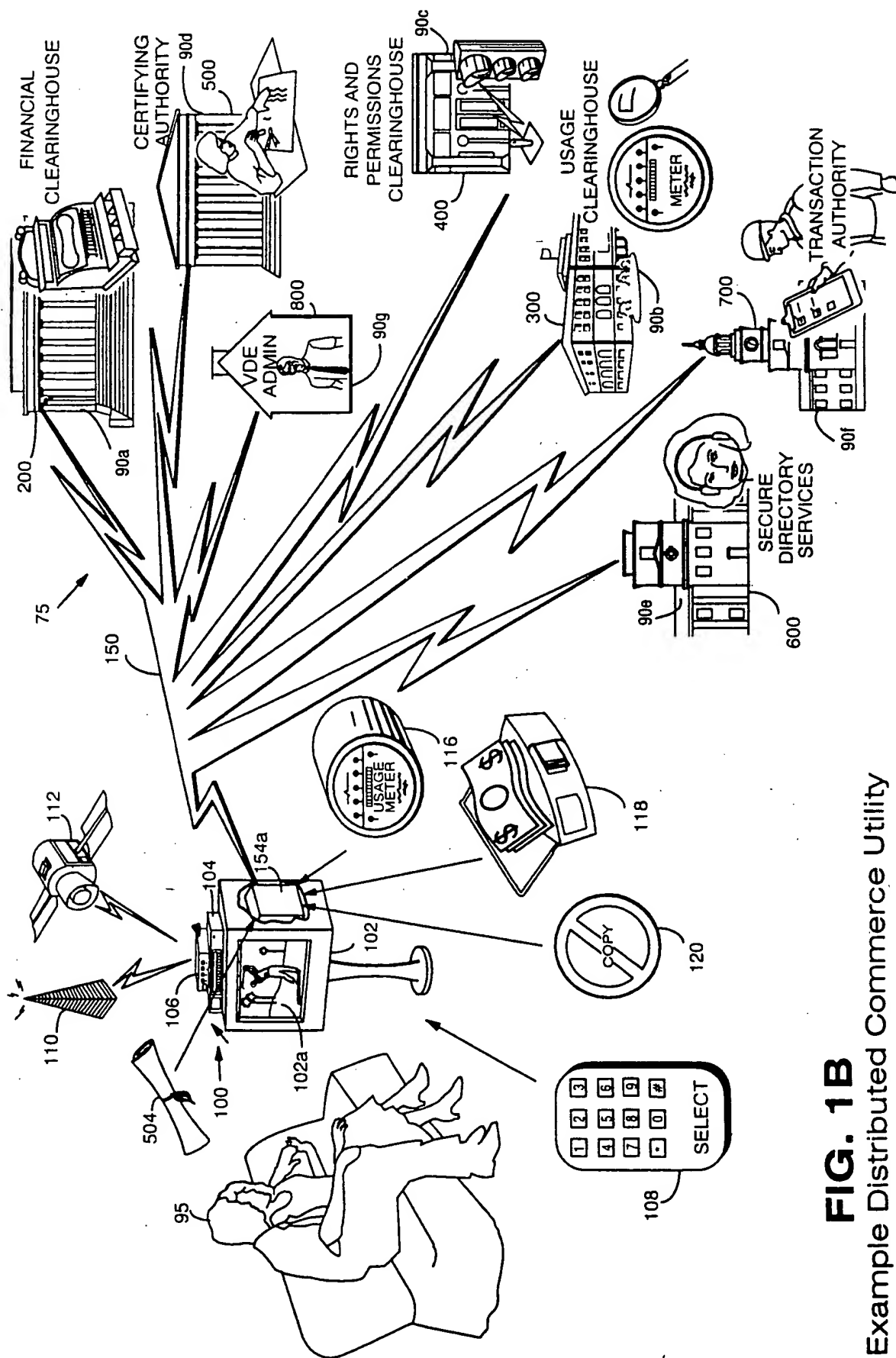


FIG. 1

**FIG. 1A**  
Electronic Appliances Have  
Protected Processing Environments





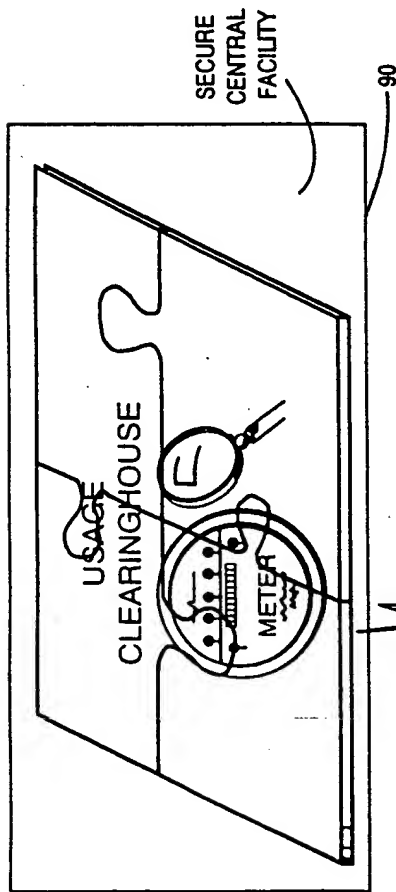


FIG. 2A

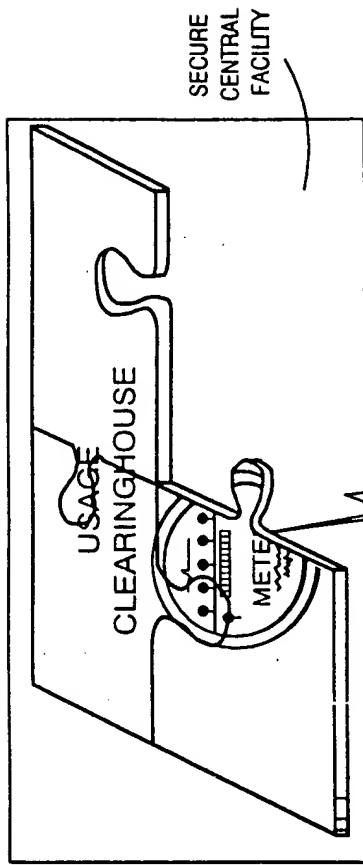
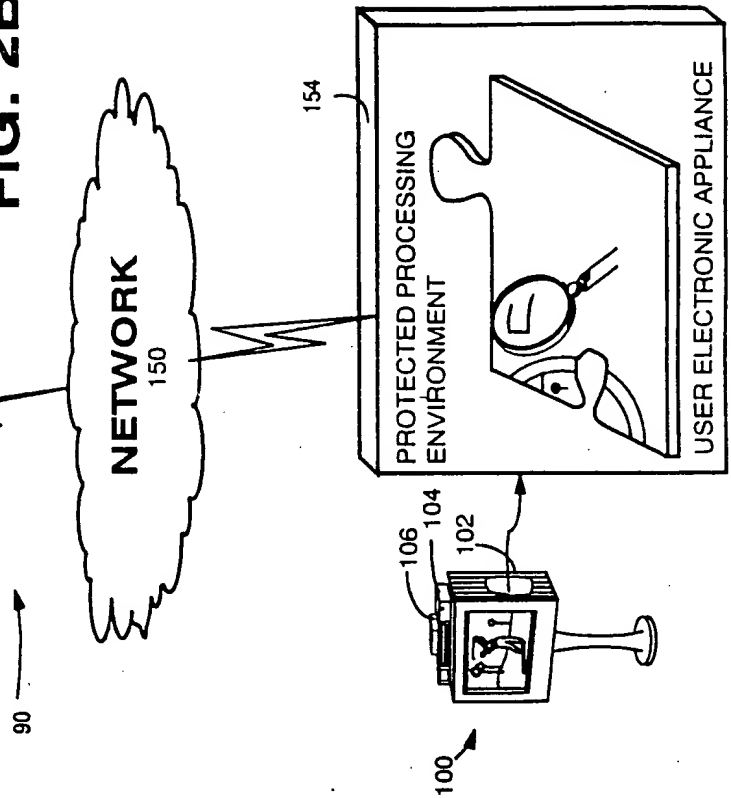


FIG. 2B



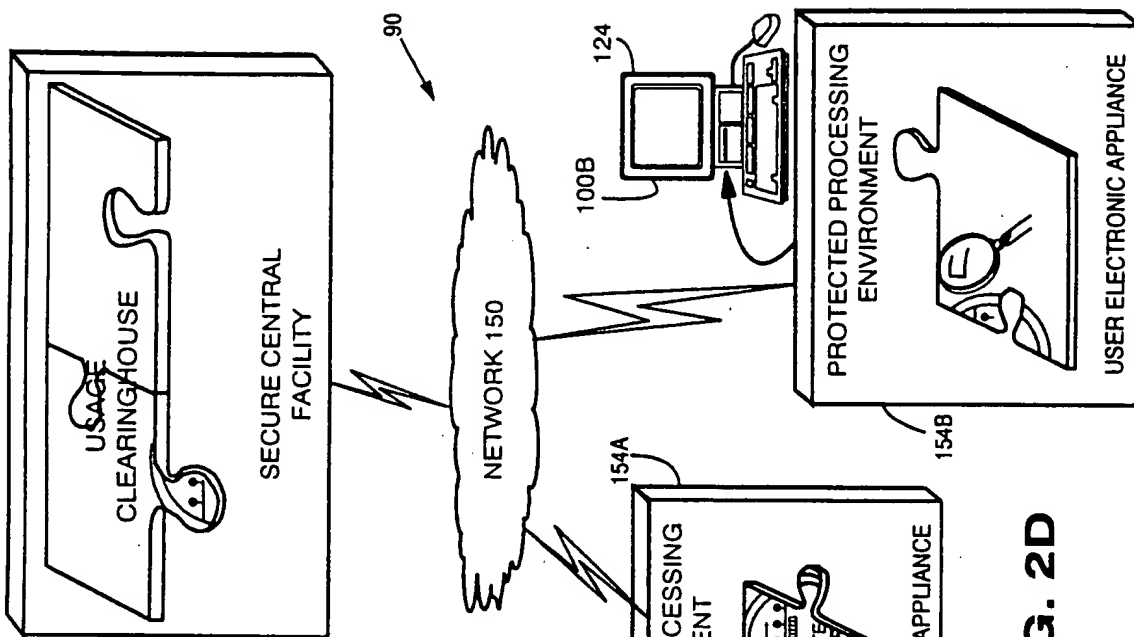


FIG. 2C

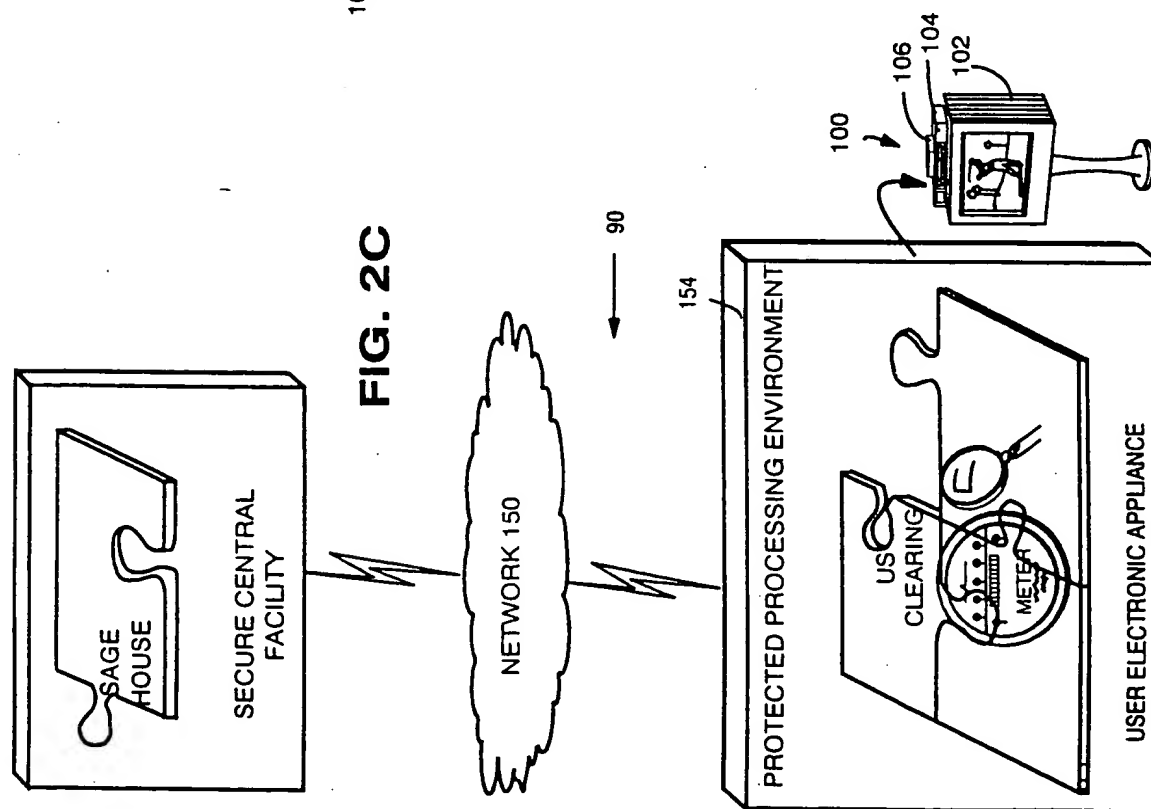


FIG. 2D

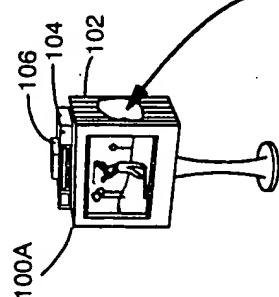


FIG. 2E

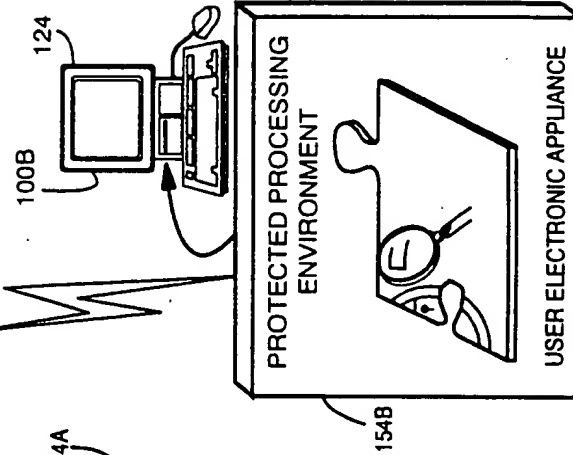
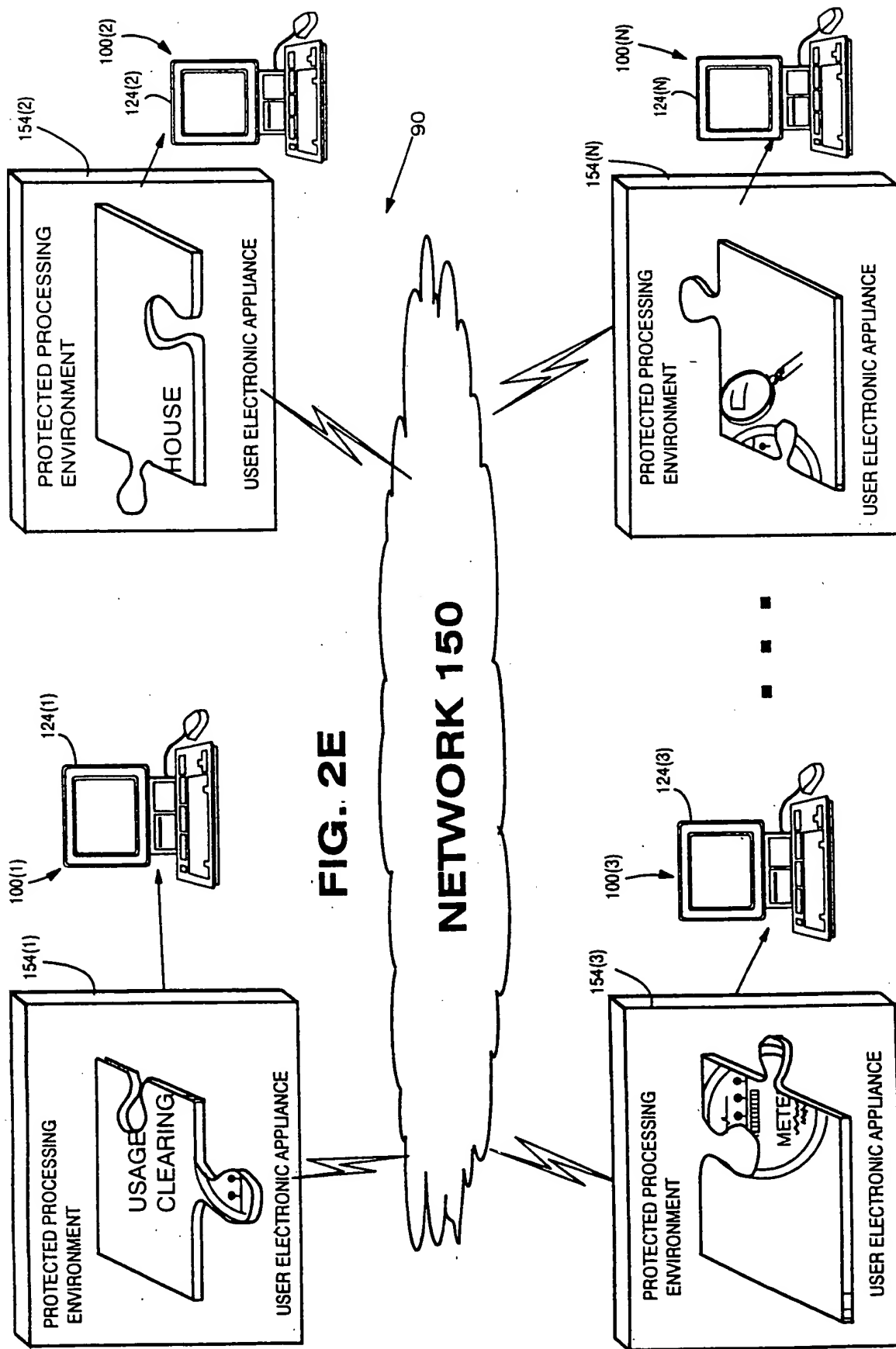
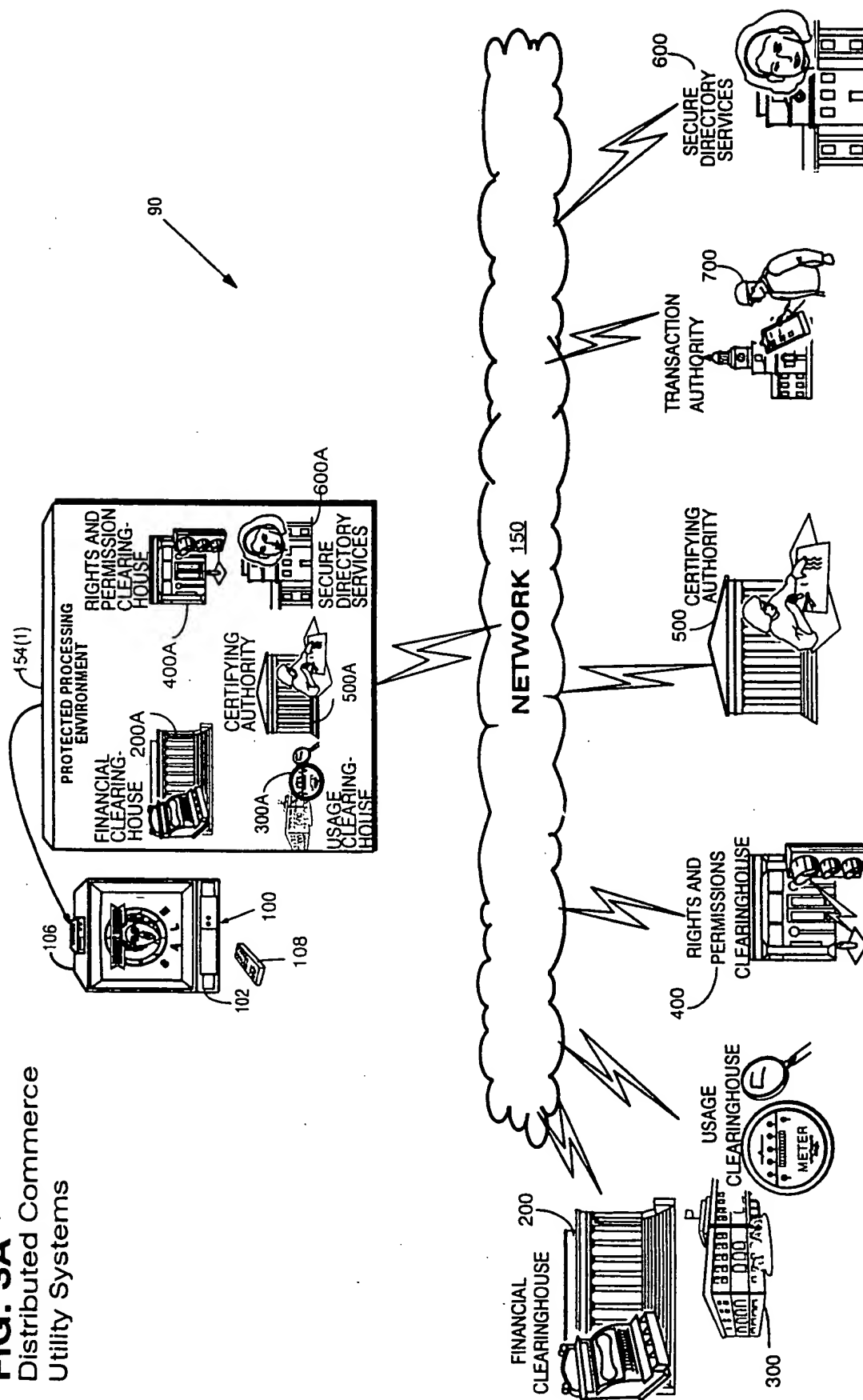


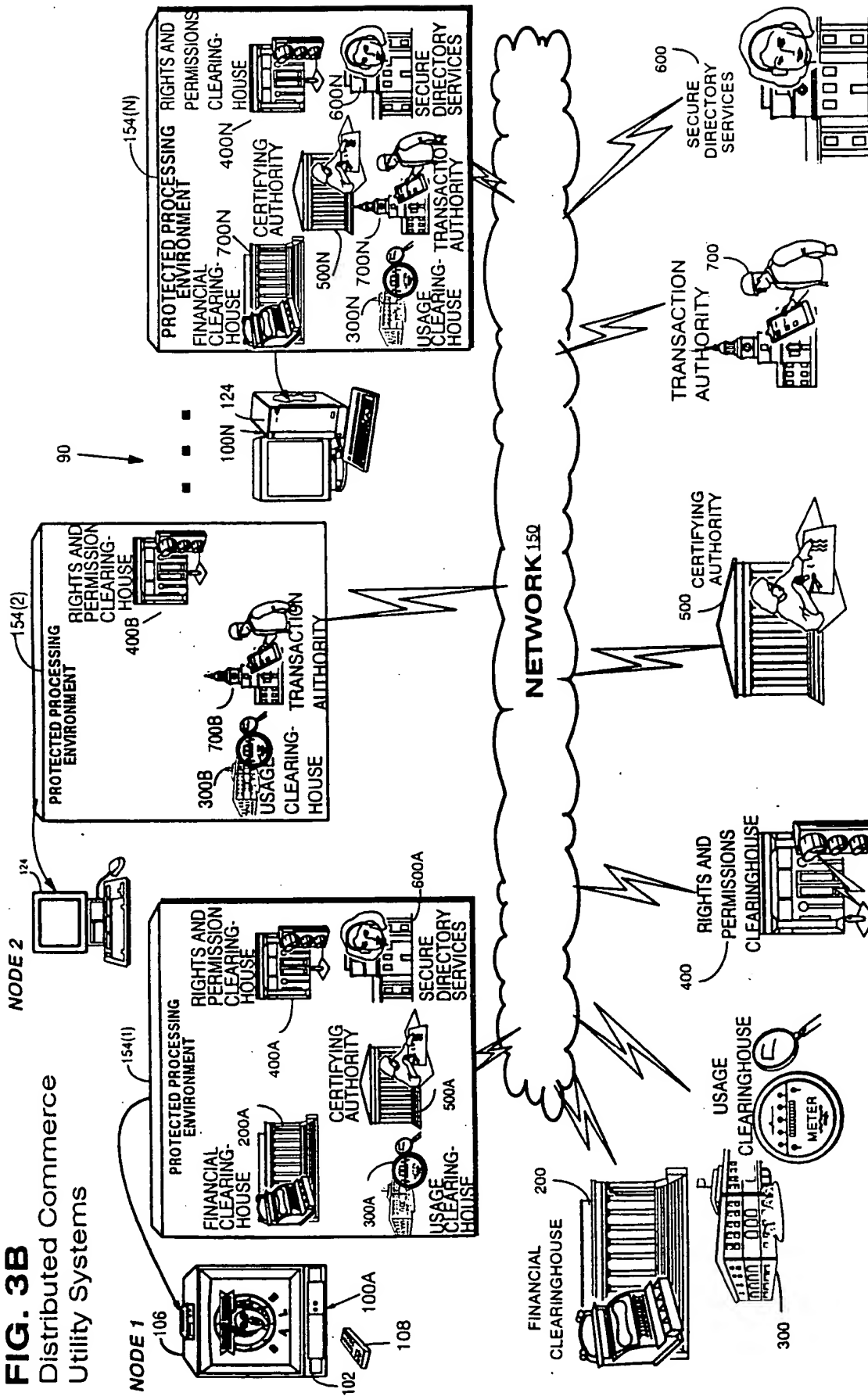
FIG. 2F



**FIG. 3A**  
Distributed Commerce  
Utility Systems



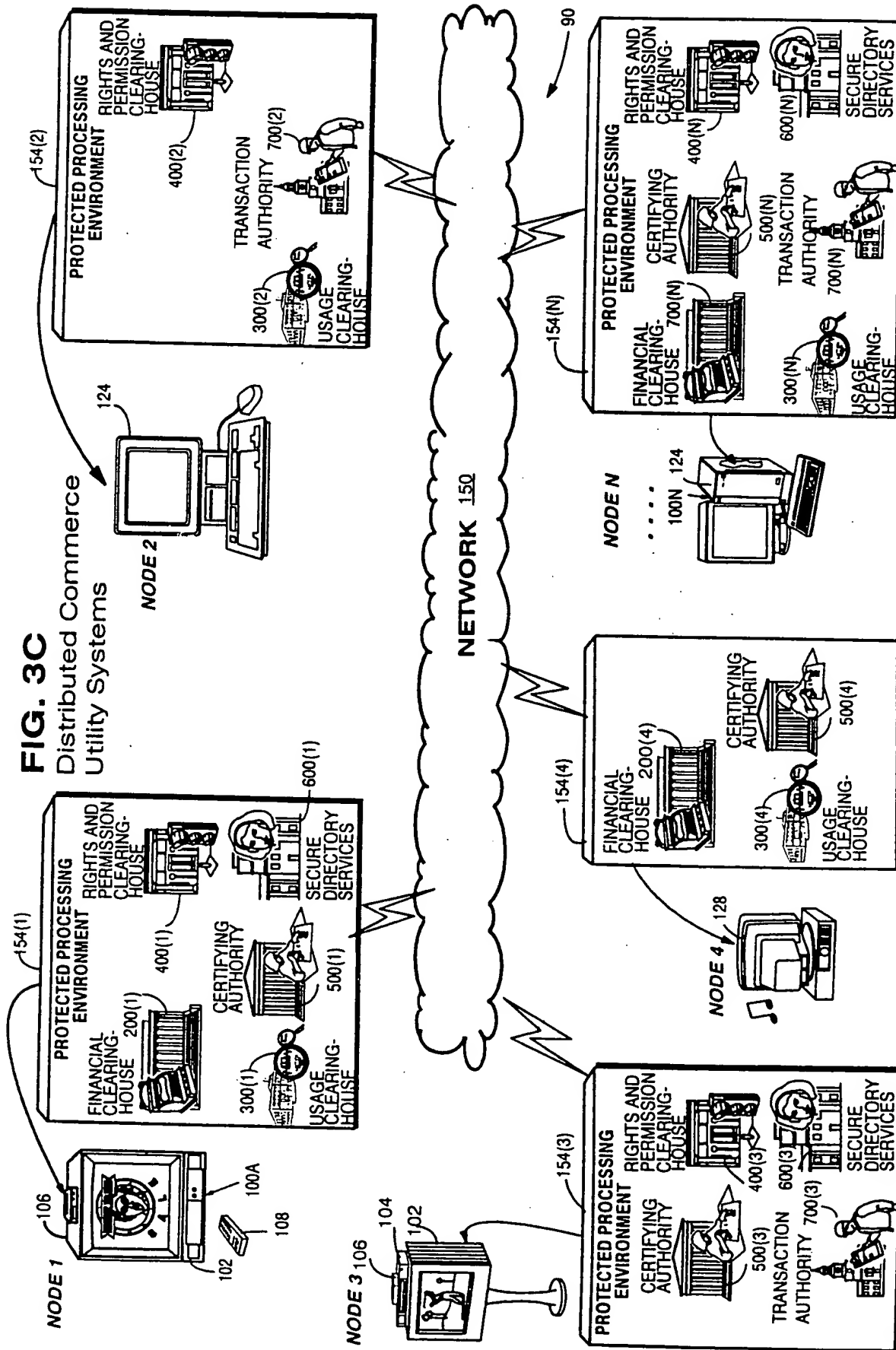
**FIG. 3B**  
Distributed Commerce  
Utility Systems





**FIG. 3C**

Distributed Commerce  
Utility Systems



**FIG. 4**  
Web of Commerce  
Utility Systems

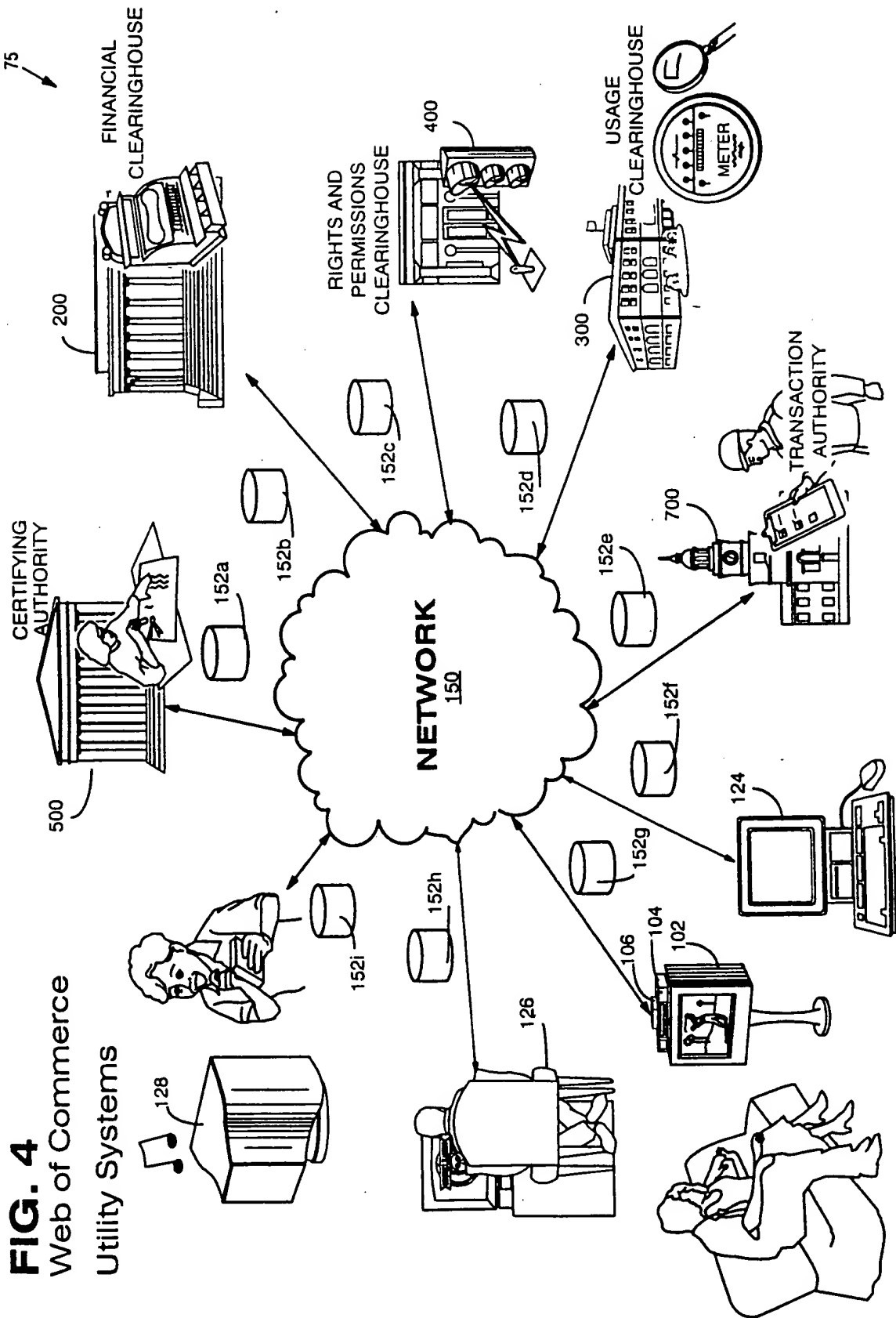
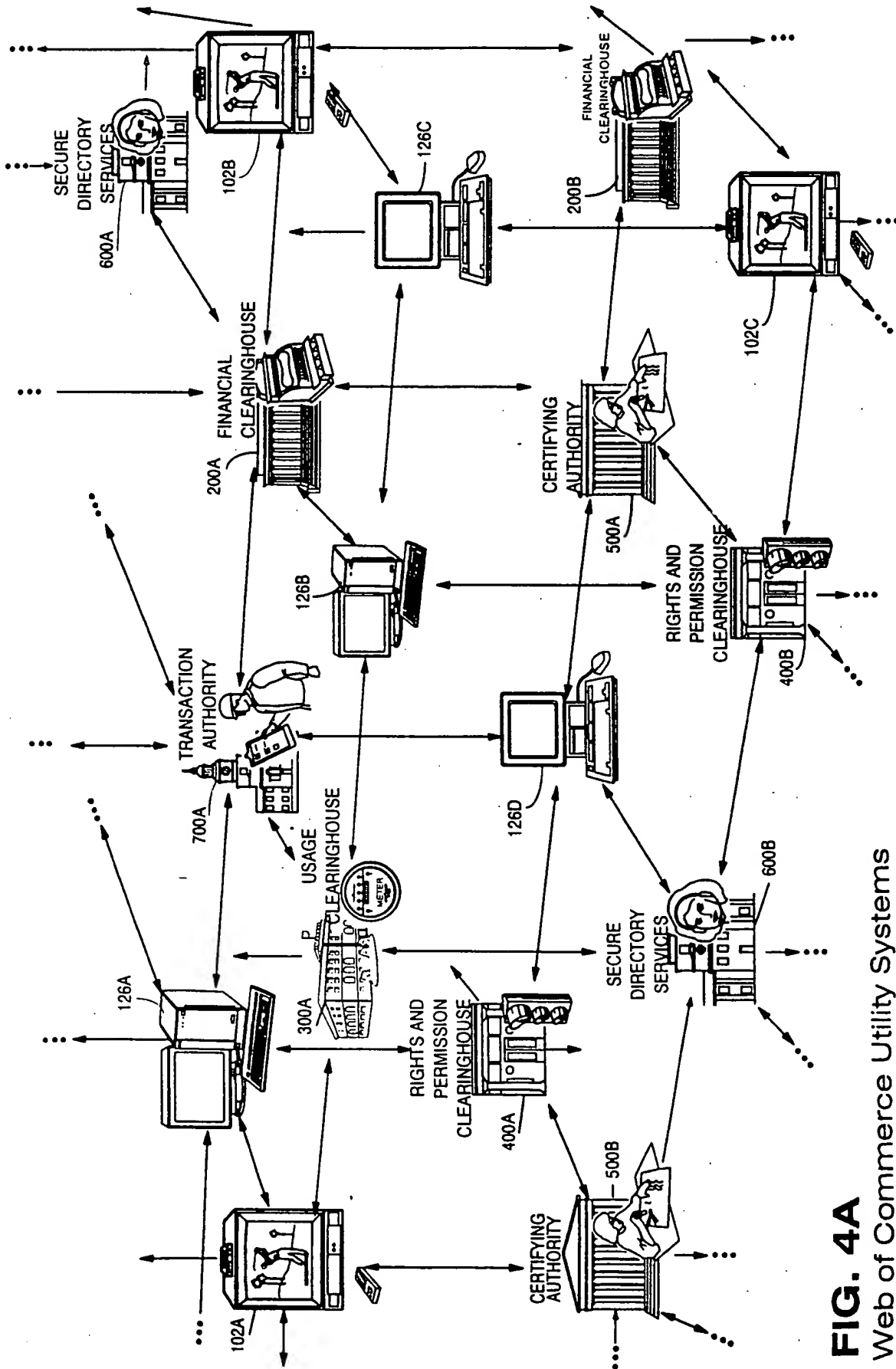
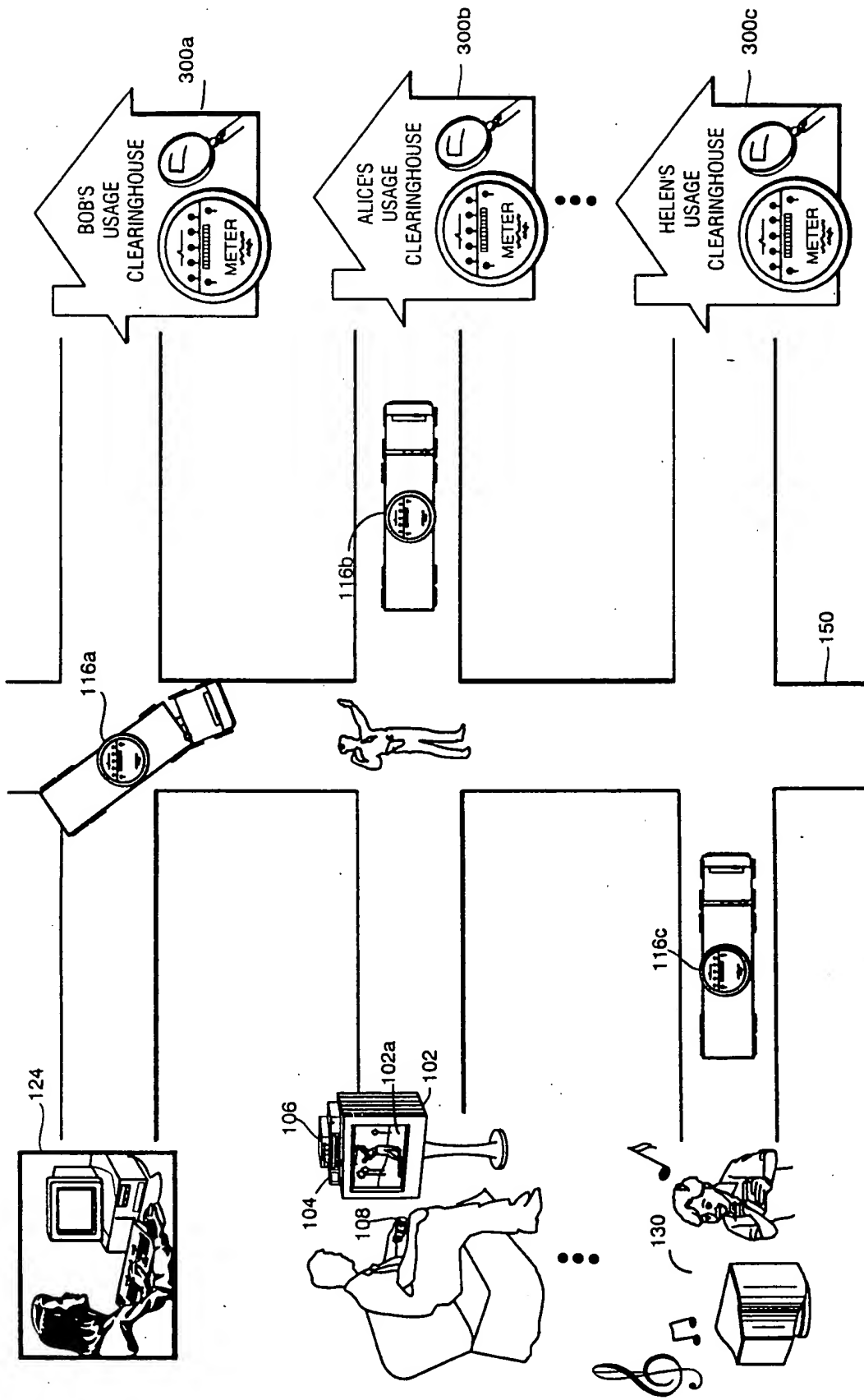


FIG. 4A is a schematic diagram of a Web of Commerce Utility Systems. The diagram illustrates a network of interconnected components, including various types of devices and services, all connected to a central network. The components are labeled with reference numerals and names, and their interconnections are shown by arrows. The components include:

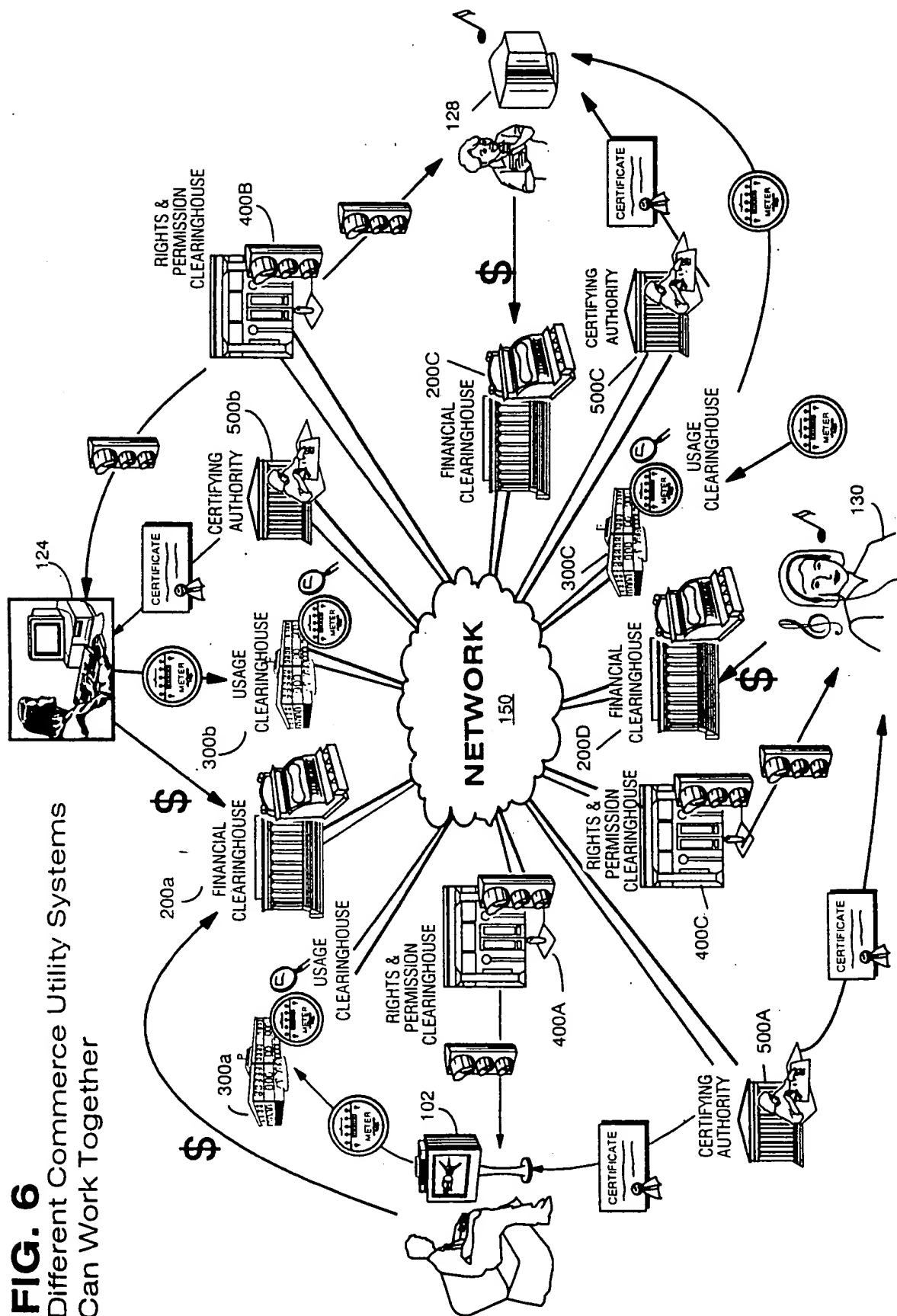


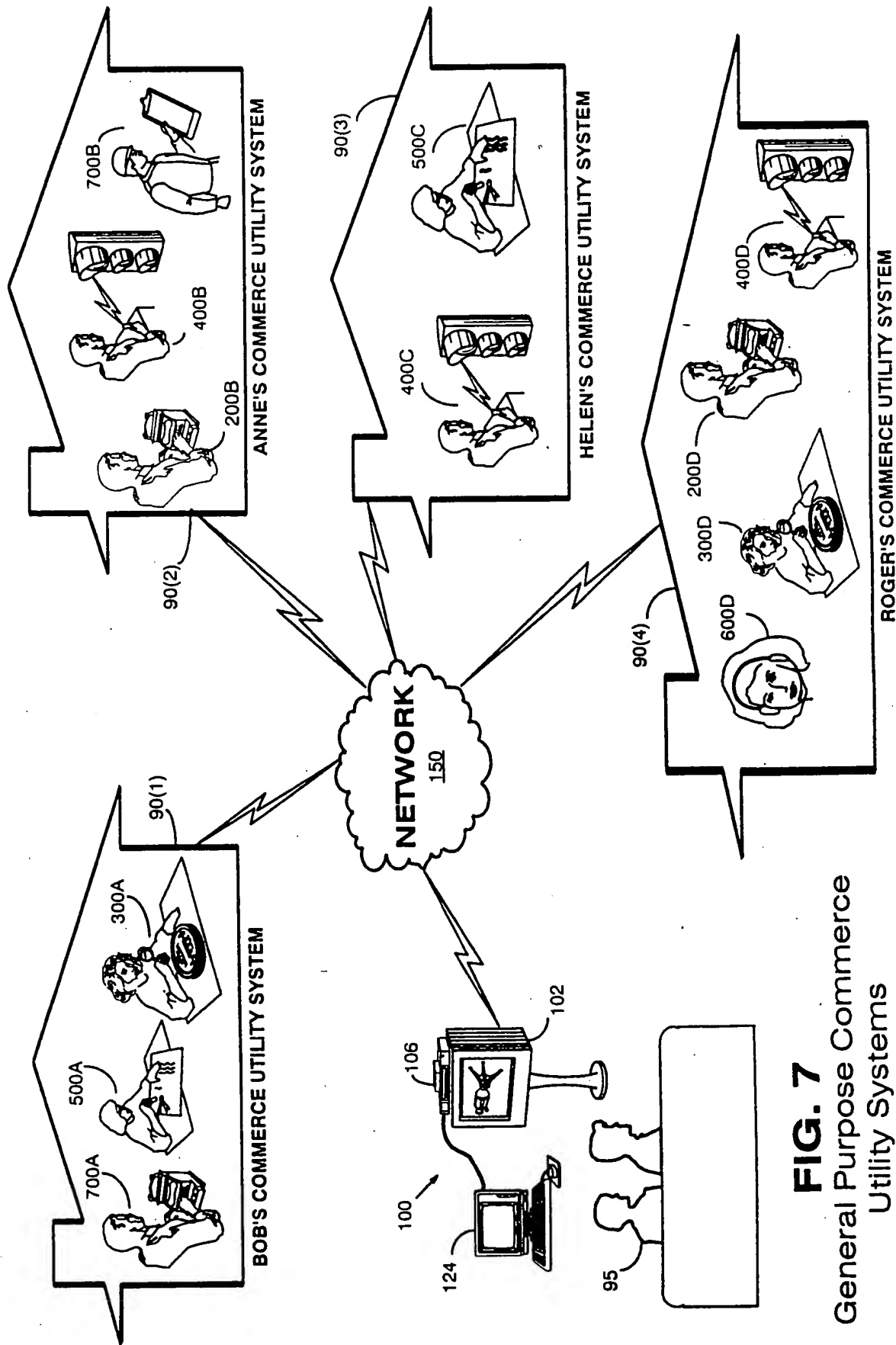
**FIG. 4A**  
Web of Commerce Utility Systems



**FIG. 5**  
Rights Holders Can Choose Between Commerce Utility Systems

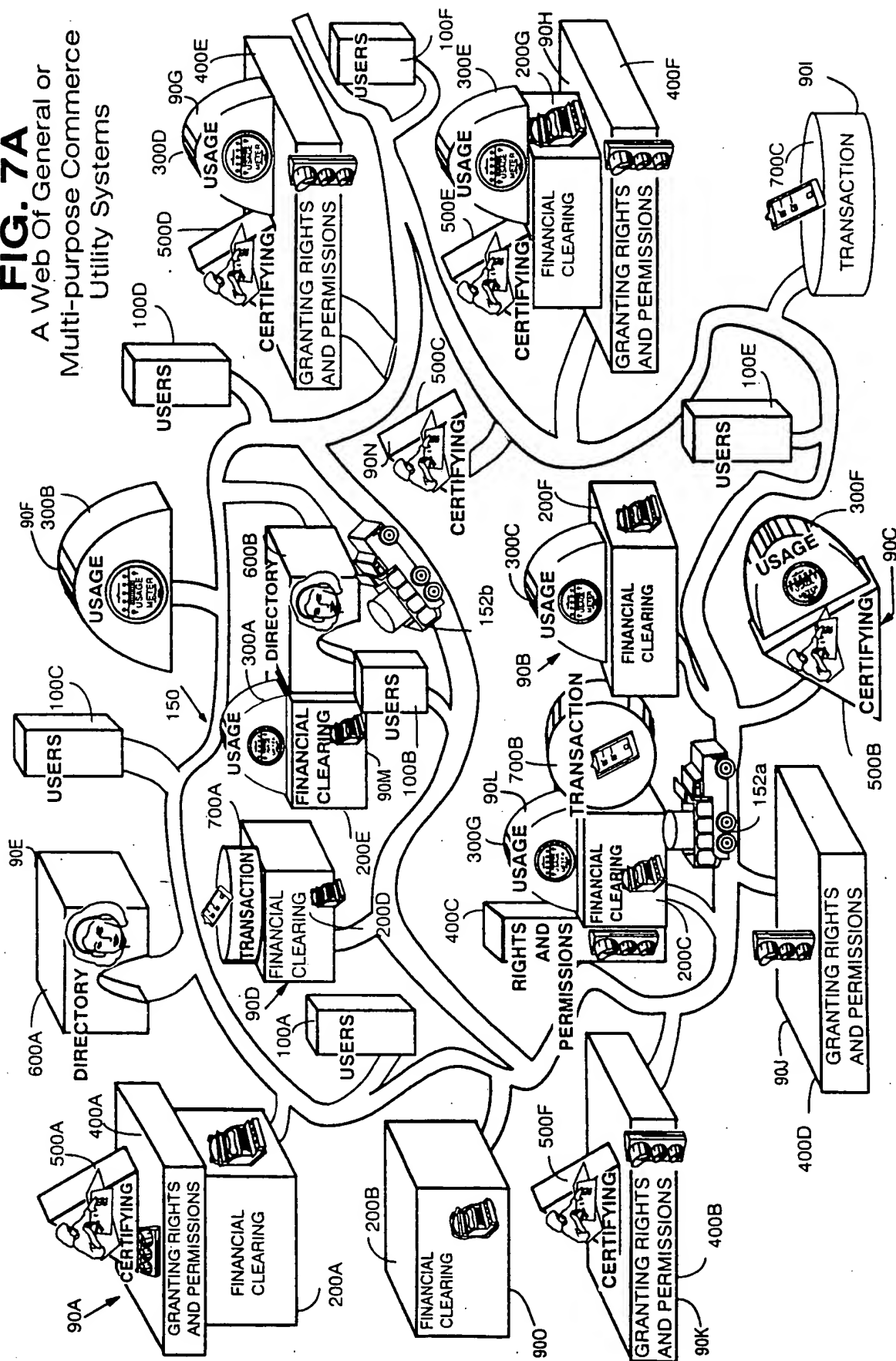
**FIG. 6**  
Different Commerce Utility Systems  
Can Work Together



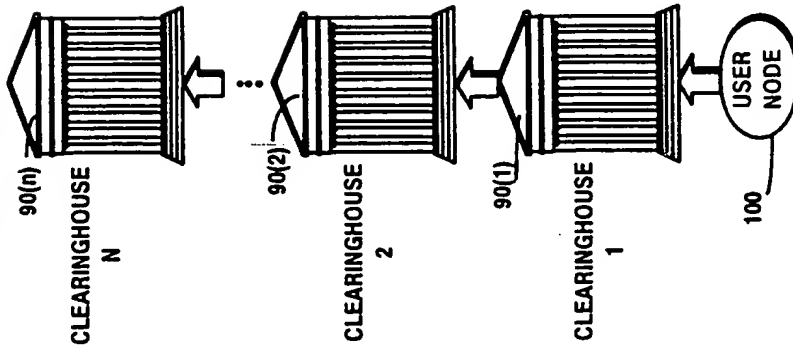


**FIG. 7**  
General Purpose Commerce  
Utility Systems

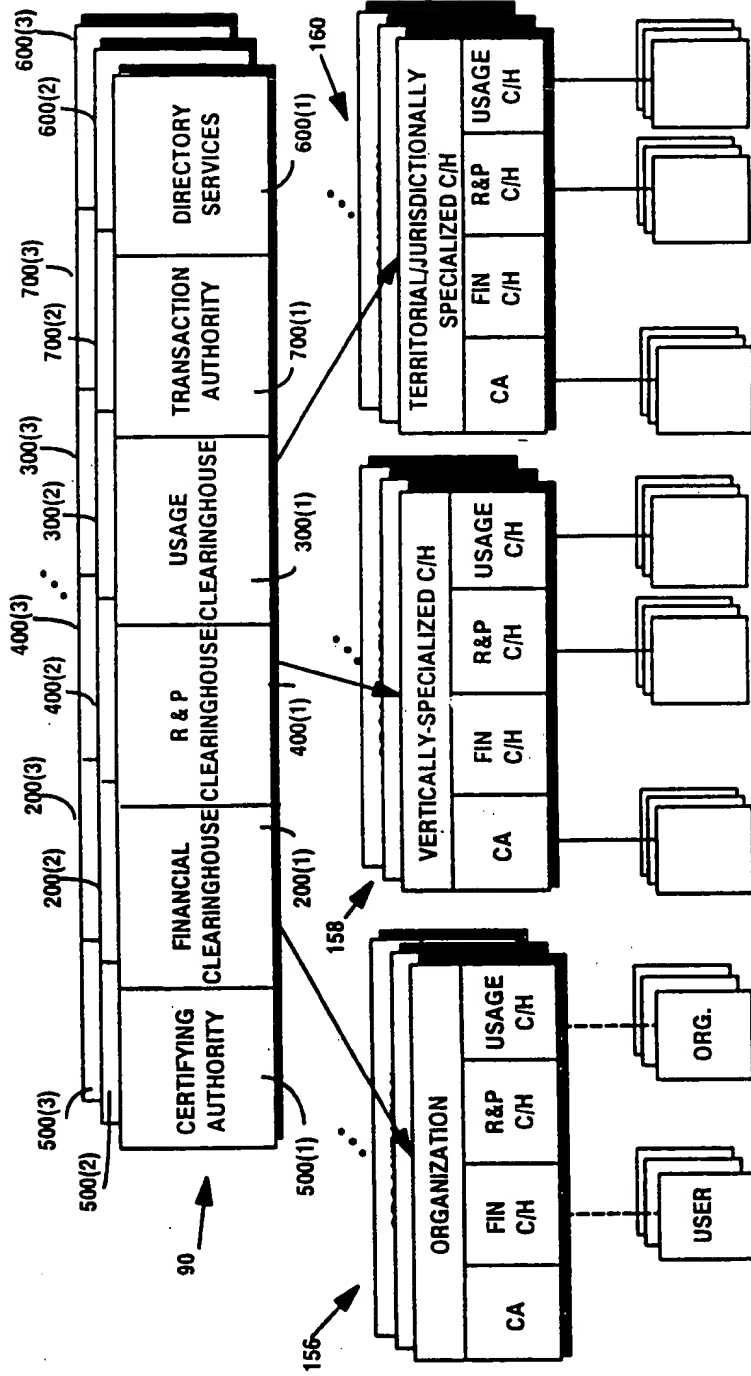
**FIG. 7A**  
A Web Of General or  
Multi-purpose Commerce  
Utility Systems



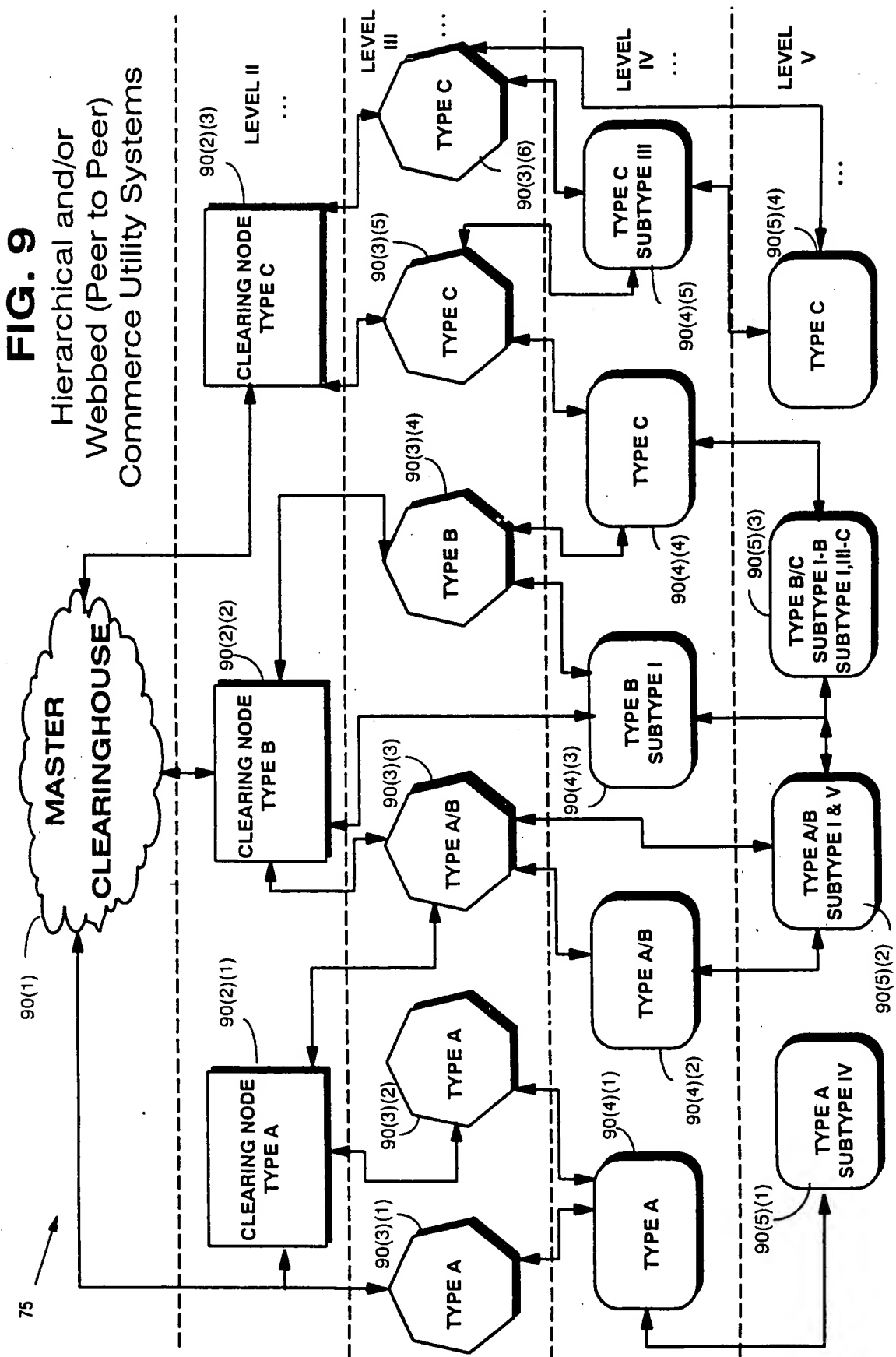
**FIG. 8A**



**FIG. 8B**  
Hierarchy Of Commerce  
Utility Systems

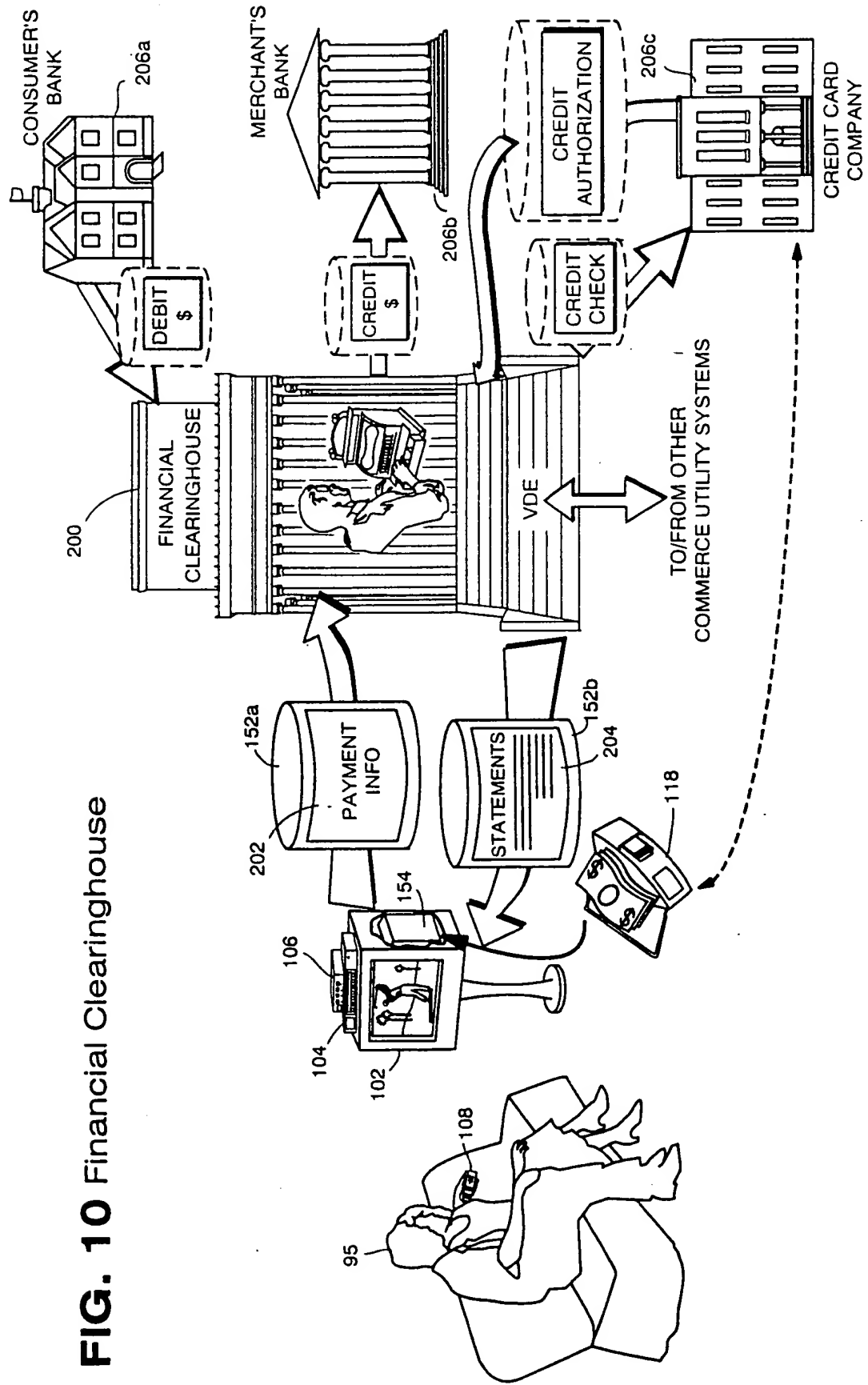




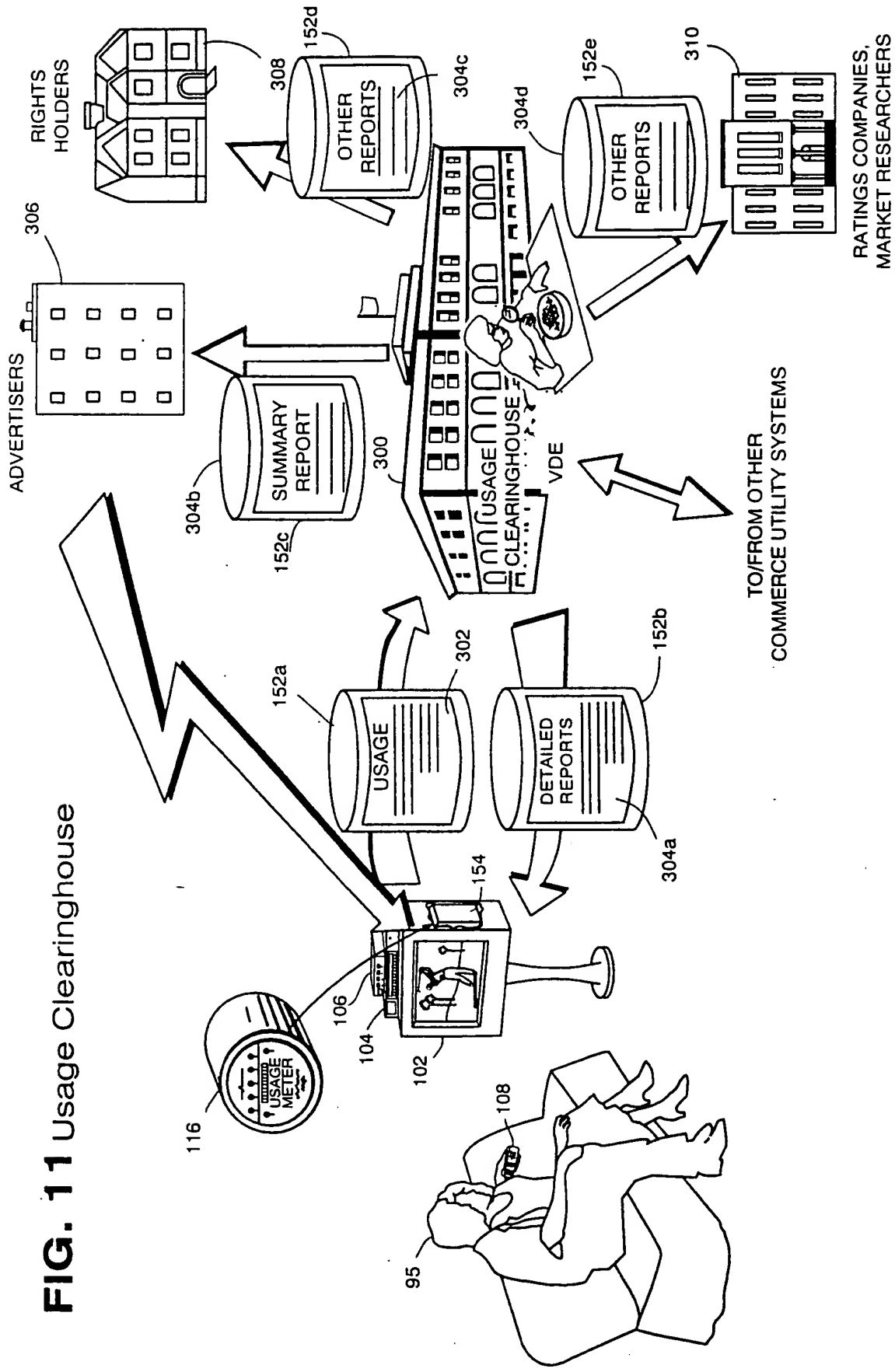


**FIG. 9**  
Hierarchical and/or  
Webbed (Peer to Peer)  
Commerce Utility Systems

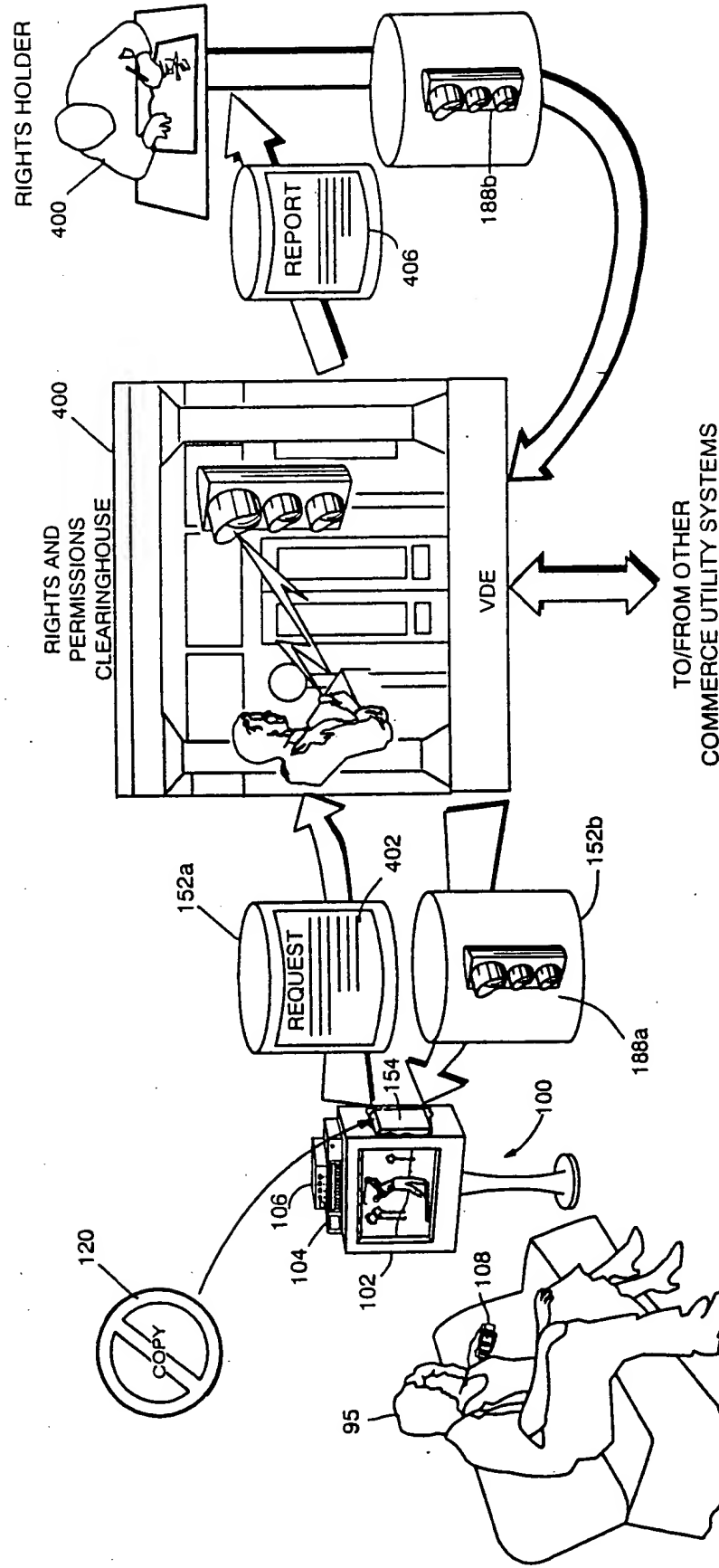
**FIG. 10** Financial Clearinghouse



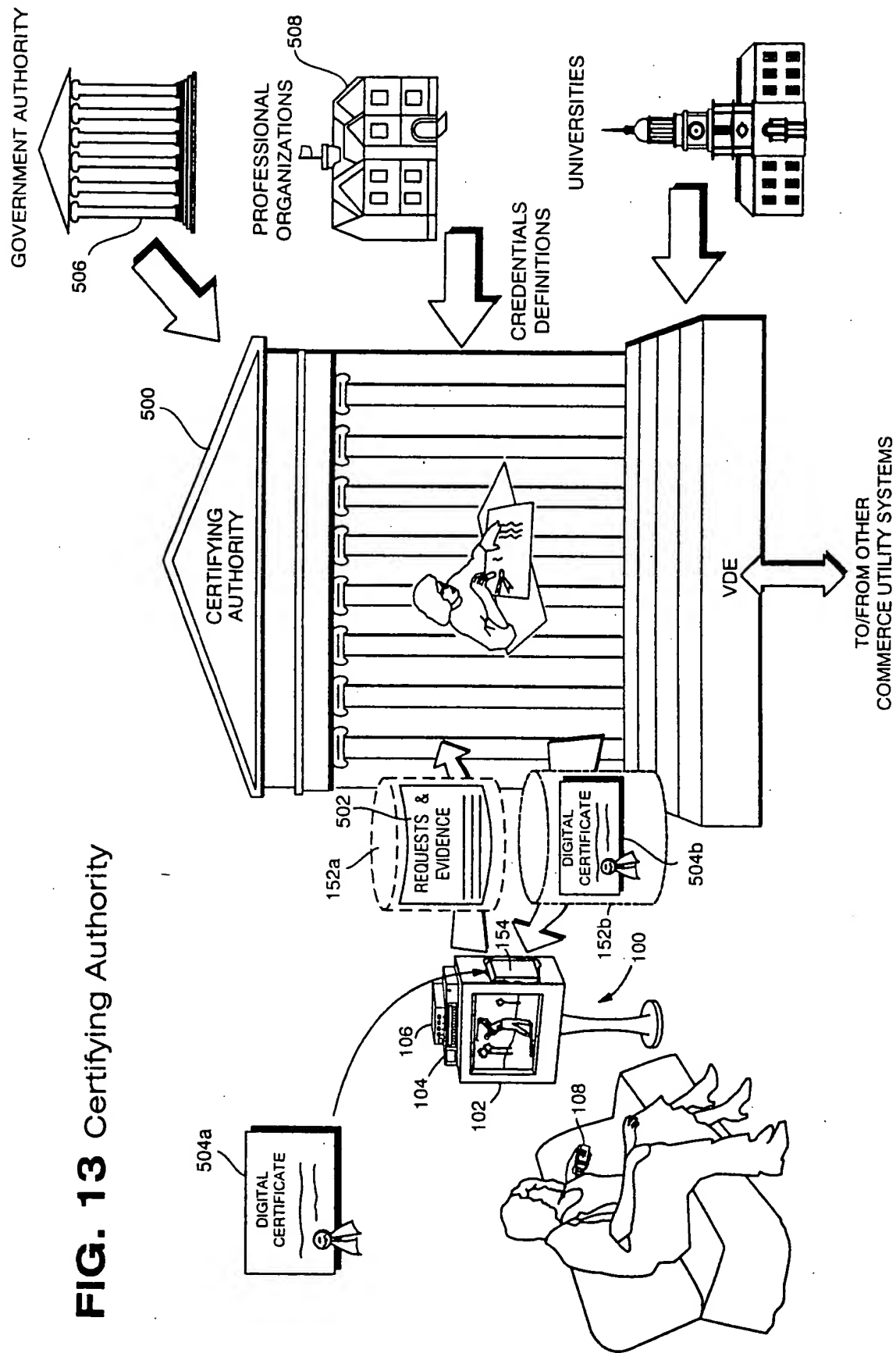
**FIG. 11** Usage Clearinghouse



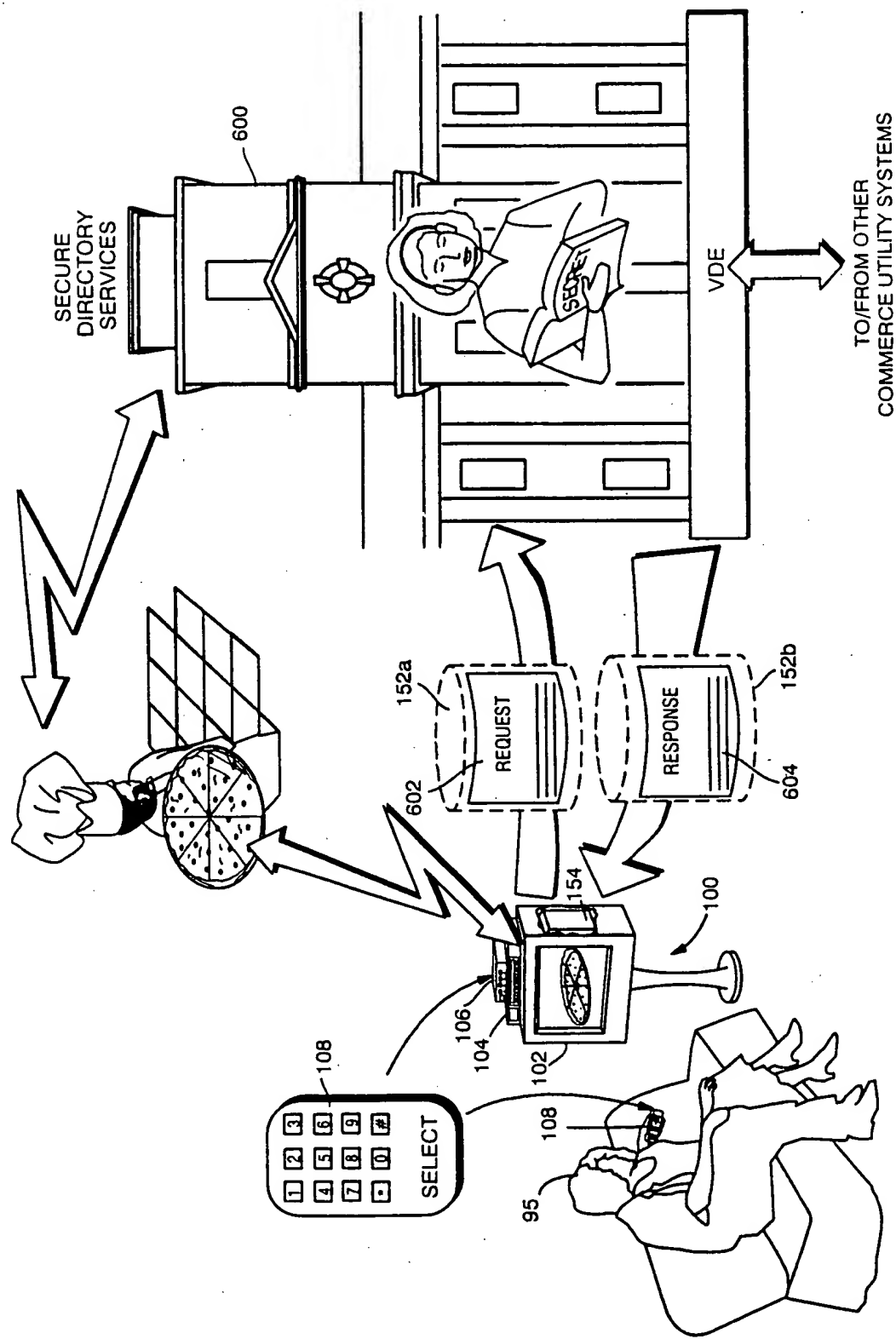
**FIG. 12** Rights and Permissions Clearinghouse



**FIG. 13** Certifying Authority



**FIG. 14** Secure Directory Services



**FIG. 15**

Transaction Authority

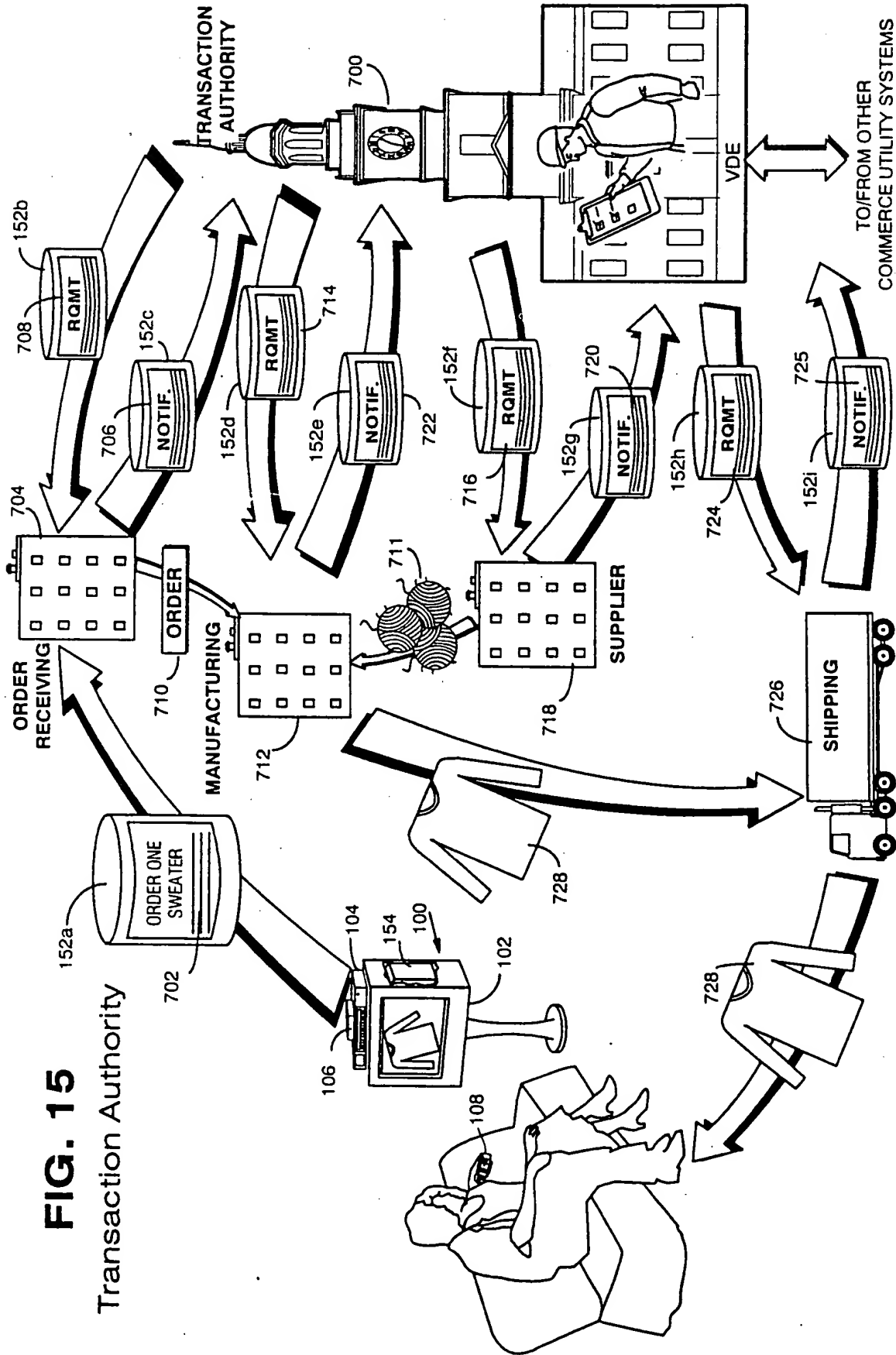


FIG. 16A

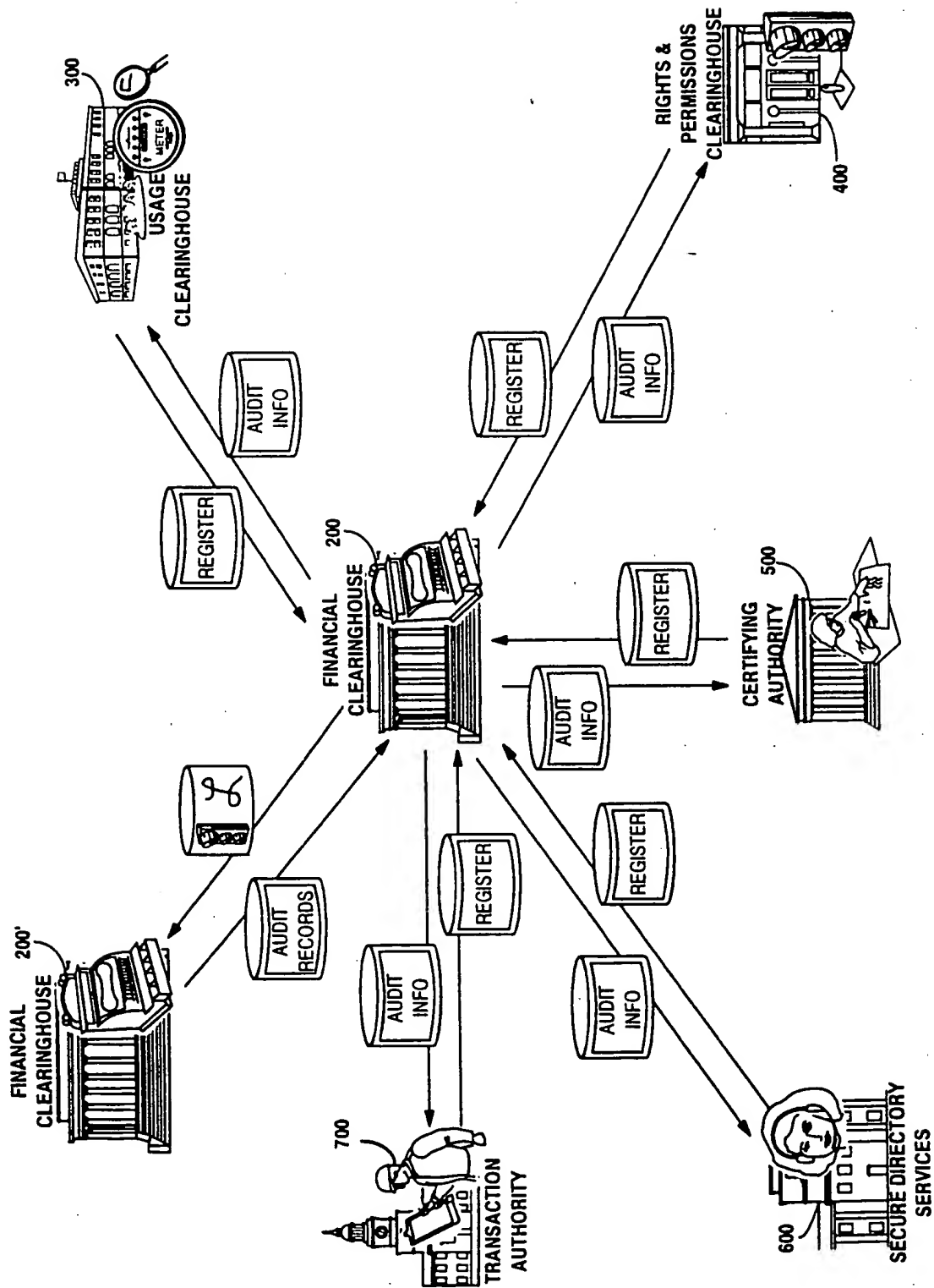




FIG. 16B

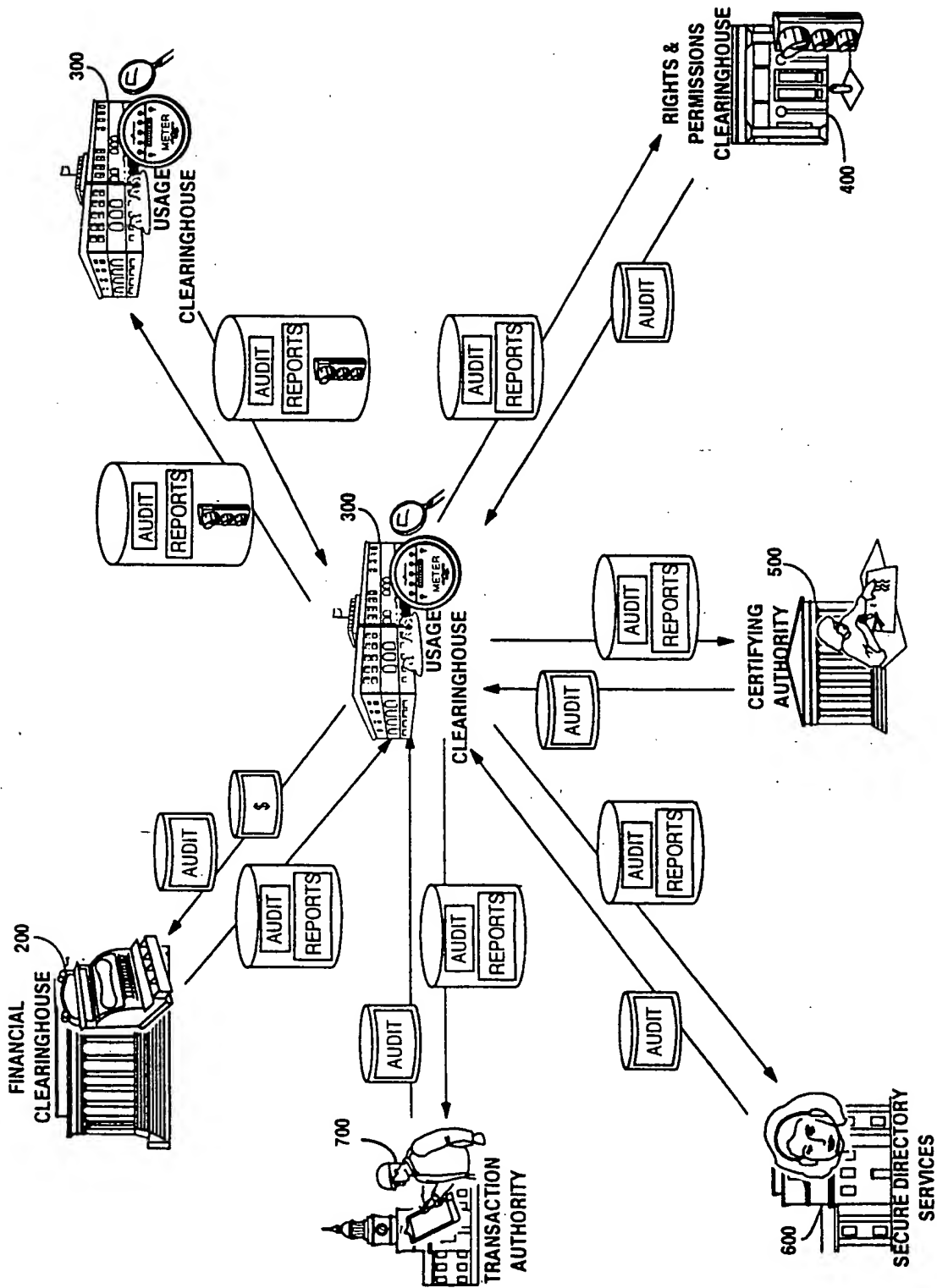


FIG. 16C

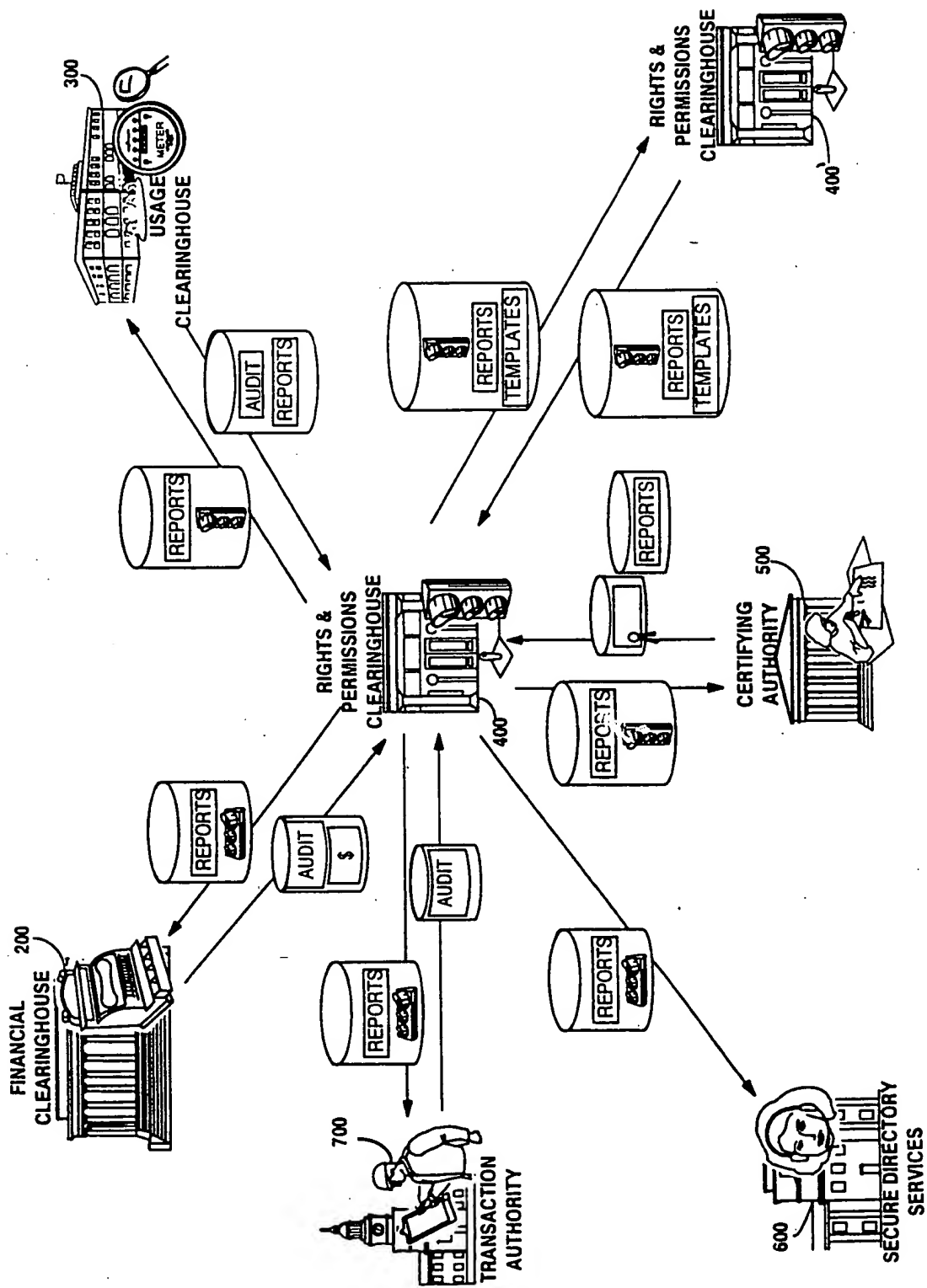


FIG. 16D

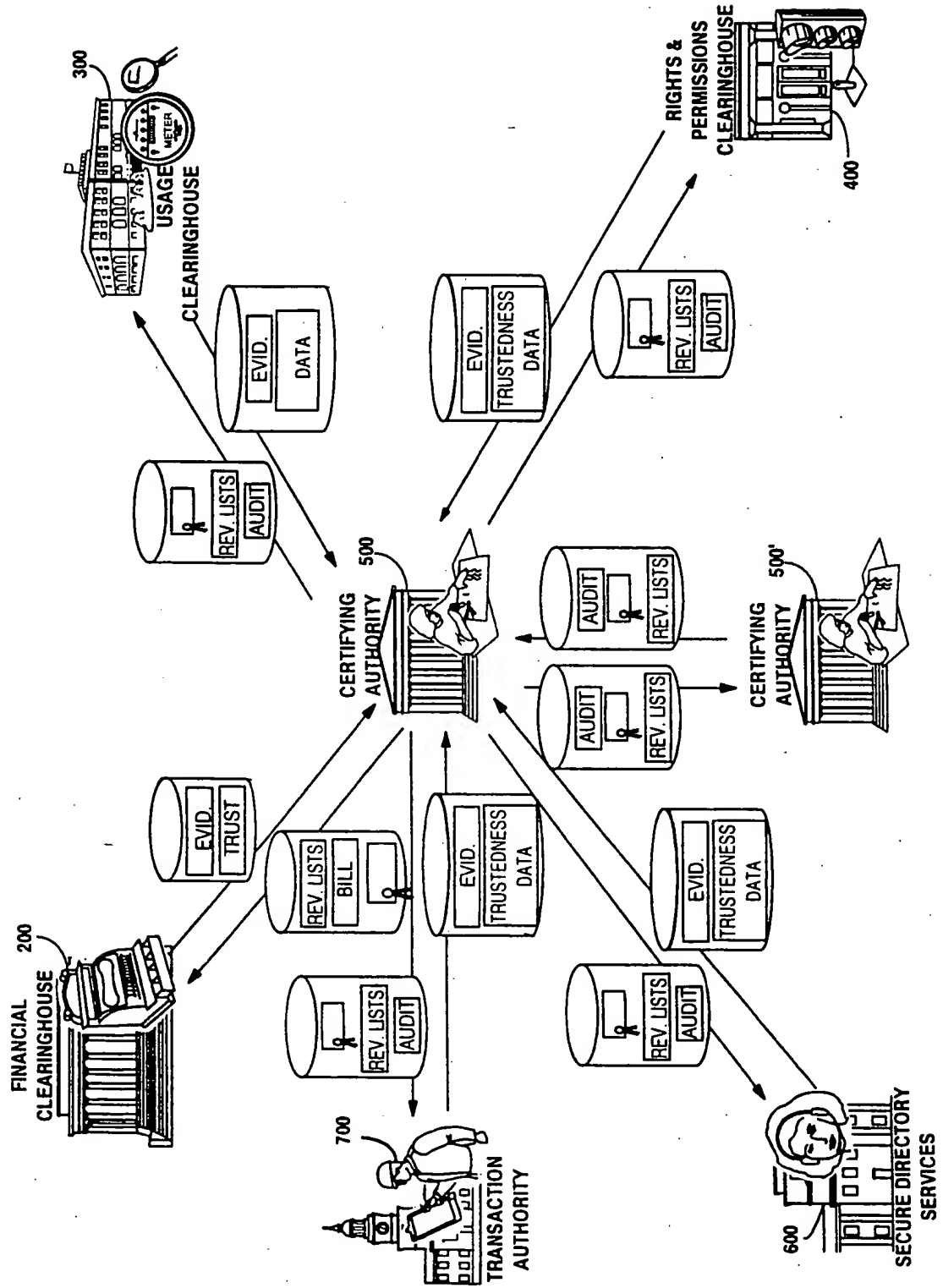


FIG. 16E

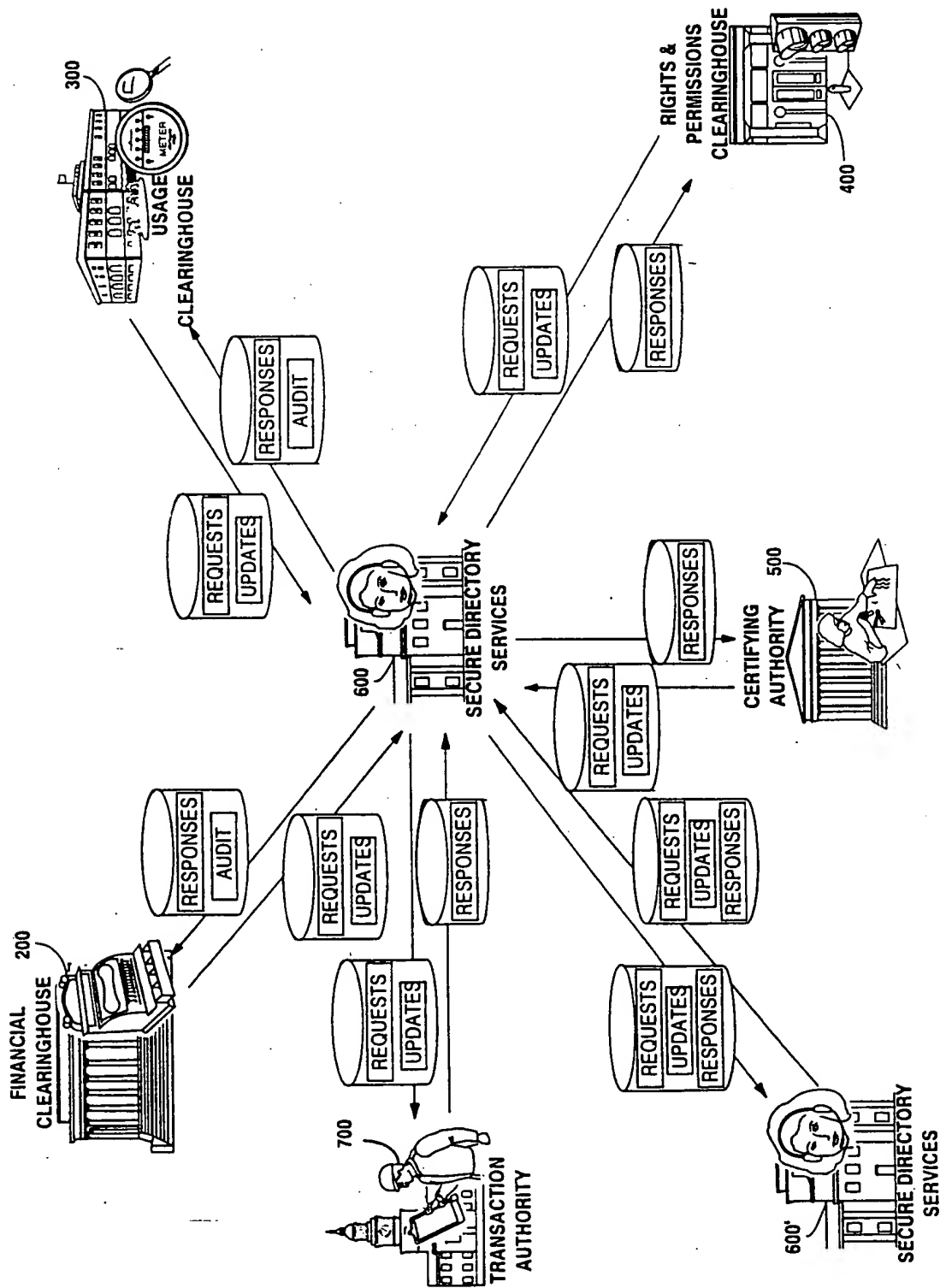
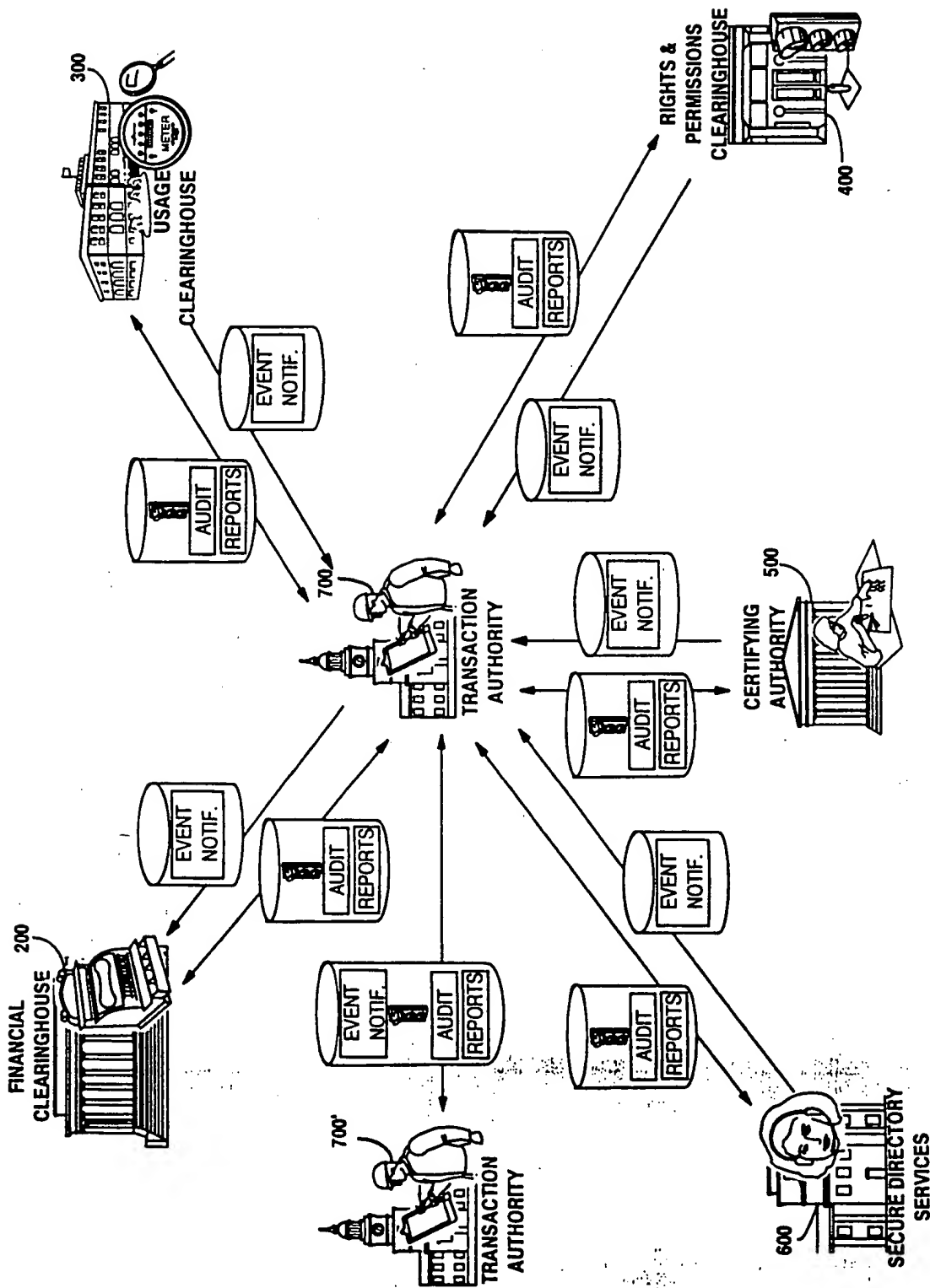
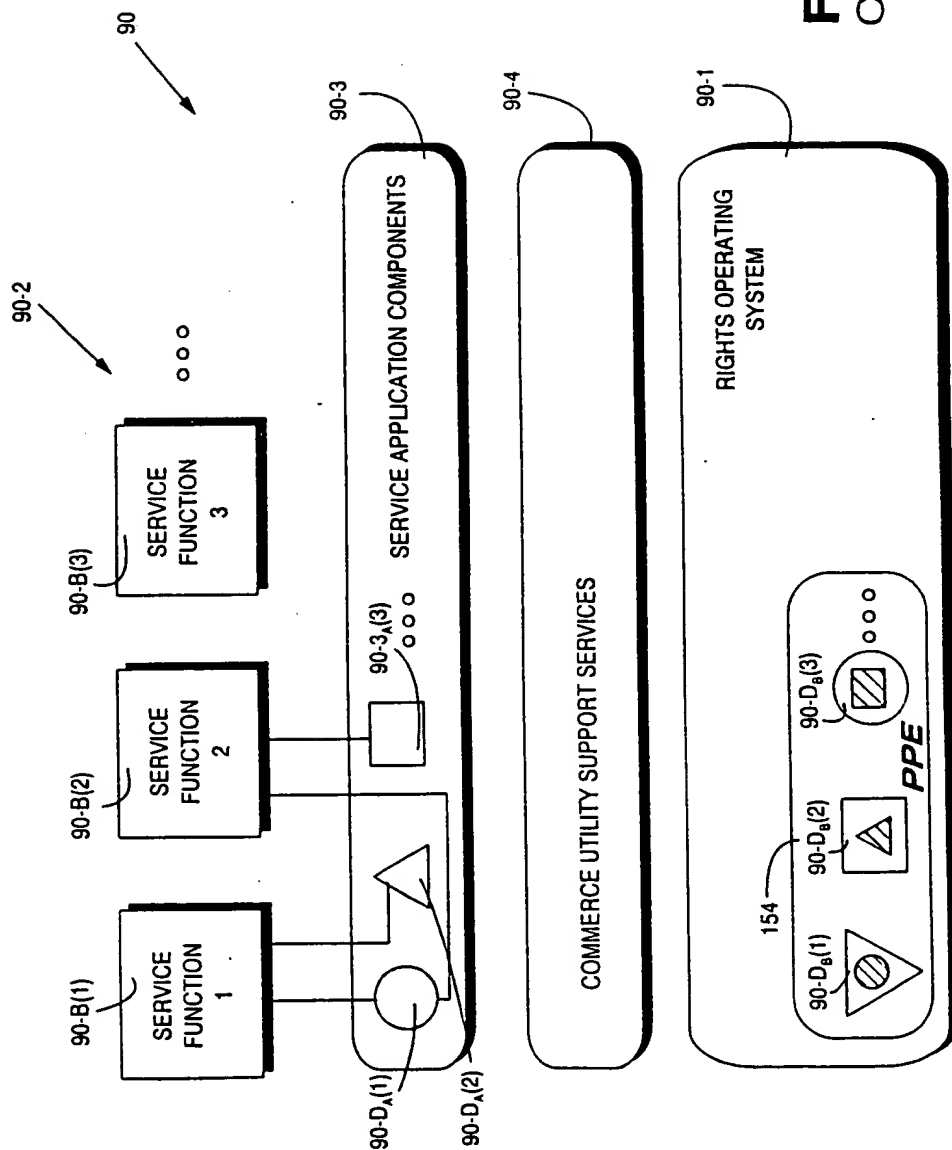


FIG. 16F





**FIG. 17A**  
Commerce Utility System 90

FIG. 17B

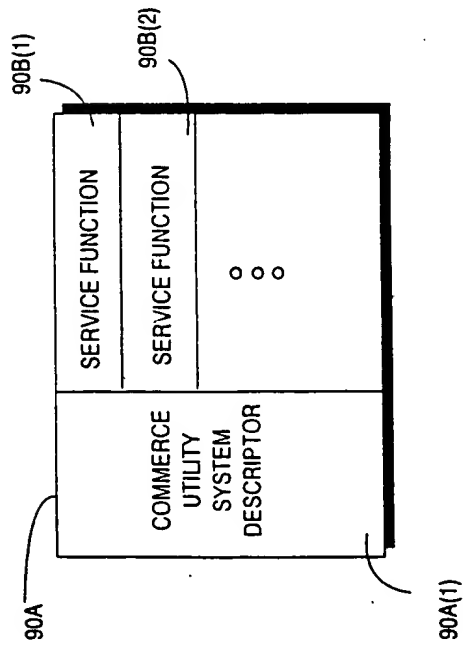


FIG. 17B

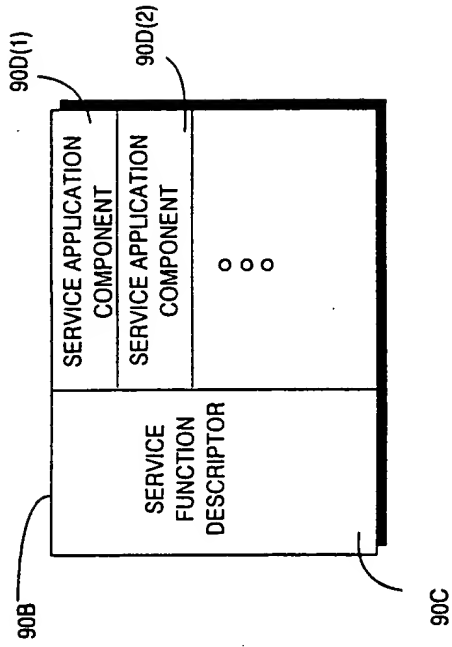


FIG. 17C

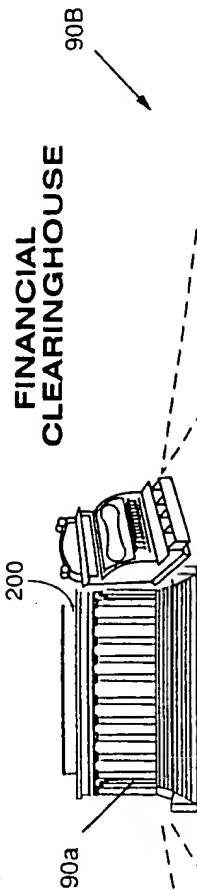
FIG. 17D-1

FINANCIAL CLEARINGHOUSE	USAGE CLEARINGHOUSE	RIGHTS & PERMISSIONS CLEARINGHOUSE	CERTIFICATE AUTHORITY	SECURE DIRECTORY SERVICES	TANGIBLES & PURCHASE & FULFILLMENT	INTANGIBLES & PURCHASE & FULFILLMENT	CONTRACT NEGOTIATIONS & EXECUTION	EDI	SECURE DOCUMENT DELIVERY	BUSINESS PROCESS INTEGRATION	ARBITRATION & MEDIATION	ELECTRONIC ORDERS	ELECTRONIC CURRENCY MANAGEMENT	CYBERSPACE TRADING ENVIRONMENTS		
AUDIT		MAINTAINING RECORDS		STATUS NOTIFICATION		EVENT DATABASE MANAGEMENT		CONTROL SET DATABASE MGMT		NOTARY		OBJECT REGISTRY		CERTIFICATE CREATION		...
OVERSEEING PROCESS		CONFIRMATIONS		ROUTING DATABASE		GENERATE CONTROL SETS		SEAL GENERATOR		OBJECT IDENTIFIER ASSIGNMENT		REVOCACTION LIST MAINTENANCE		...		
MONITORING STATUS		UNCOMPLETED EVENTS RECORD		GENERATING REQUESTS		PROCESS CONTROL LOGIC		DIGITAL TIME STAMP		COPYRIGHT REGISTRATION		...				
COMPLETE PROCESS DEFINITION		REQUIREMENTS GENERATION		REPLICATION		EVENT FLOW GENERATION		FINGERPRINT /WATERMARK		CONTROL SET		...				
PROCESS CONTROL		REPORT GENERATION		PROPAGATION		ROUTING		OFFERS & COUNTER OFFERS		TEMPLATE REGISTRY		DIRECTOR DATABASE MANAGEMENT		...		
INTERFACE(S) TO SETTLEMENT SERVICES		FUNDS TRANSFER		EVENT CONSEQUENCES		USAGE DATABASE MANAGEMENT		ARCHIVE		DATABASE QUERY & RESPONSE PROCESSING		...				
CURRENCY CONVERSION		TAX CALCULATION & APPLICATION		ACCOUNT RECONCILIATION		BILL CREATION & PROCESSING		RIGHTS & PERMISSION DATABASE MANAGEMENT		ADVERTISING DATABASE MANAGEMENT		...				
ACCOUNT CREATION & IDENTIFIER ASSIGNMENT		PAYMENT AGGREGATION		IDENTITY AUTHENTICATION		MARKET RESEARCH		TEMPLATE DATABASE MANAGEMENT		AUTOMATIC CLASS GENERATION		...				
PAYMENT DISAGGREGATION		BUDGET PRE-AUTHORIZATION		ELECTRONIC CURRENCY CREATION		NEGOTIATION		COMMERCE MGMT LANGUAGE PROCESSING		AUTOMATIC CLASS ASSIGNMENT		...				
:		:		RIGHTS MANAGEMENT LANGUAGE PROCESSING		:		:		:		:				
:		:		:		:		:		:		:				

90B



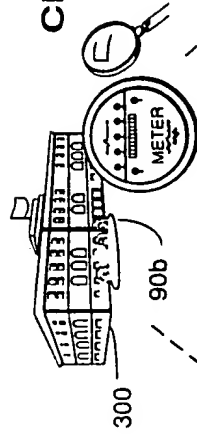
FIG. 17D-2



AUDIT	MAINTAINING RECORDS	STATUS NOTIFICATION	EVENT DATABASE MANAGEMENT	CONTROL SET DATABASE MGMT	NOTARY	OBJECT REGISTRY	CERTIFICATE CREATION	...
OVERSEEING PROCESS	CONFIRMATIONS	ROUTING DATABASE	GENERATE CONTROL SETS	SEAL GENERATOR	OBJECT IDENTIFIER ASSIGNMENT	REVOCATION LIST MAINTENANCE	...	...
MONITORING STATUS	UNCOMPLETED EVENTS RECORD	GENERATING REQUESTS	PROCESS CONTROL LOGIC	DIGITAL TIME STAMP	COPYRIGHT REGISTRATION	...	...	...
COMPLETE PROCESS DEFINITION	REQUIREMENTS GENERATION	REPLICATION	EVENT FLOW GENERATION	FINGERPRINT /WATERMARK	CONTROL SET REGISTRY	...	...	...
PROCESS CONTROL	REPORT GENERATION	PROPAGATION	ROUTING	OFFERS & COUNTER OFFERS	TEMPLATE REGISTRY	DIRECTOR DATABASE MANAGEMENT	...	...
INTERFACE(S) TO SETTLEMENT SERVICES	FUNDS TRANSFER	EVENT CONSEQUENCES	USAGE DATABASE MANAGEMENT	ARCHIVE	DATABASE QUERY & RESPONSE PROCESSING	...	...	...
CURRENCY CONVERSION	TAX CALCULATION & APPLICATION	ACCOUNT RECONCILIATION	BILL CREATION & PROCESSING	RIGHTS & PERMISSION DATABASE MANAGEMENT	ADVERTISING DATABASE MANAGEMENT	...	...	...
ACCOUNT CREATION & IDENTIFIER ASSIGNMENT	PAYMENT AGGREGATION	IDENTITY AUTHENTICATION	MARKET RESEARCH	TEMPLATE DATABASE MANAGEMENT	AUTOMATIC CLASS GENERATION	...	...	...
PAYMENT DISAGGREGATION	BUDGET PRE-AUTHORIZATION	ELECTRONIC CURRENCY CREATION	NEGOTIATION	COMMERCE MGMT LANGUAGE PROCESSING	AUTOMATIC CLASS ASSIGNMENT	...	...	...
:	:	:	RIGHTS MANAGEMENT LANGUAGE PROCESSING	:	:	:	:	:

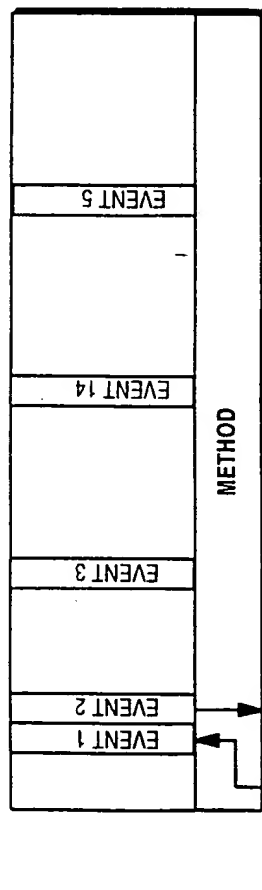
FIG. 17D-3

USAGE  
CLEARINGHOUSE

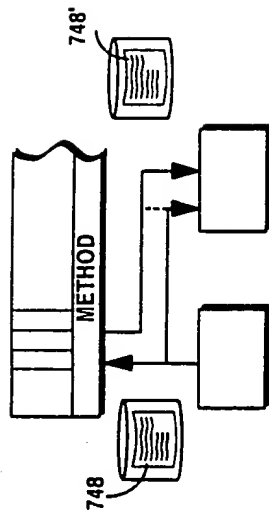


90B

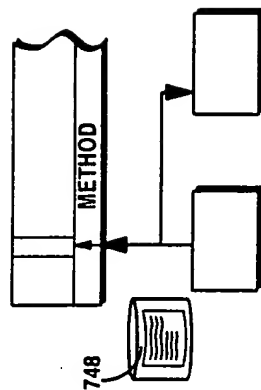
AUDIT	MAINTAINING RECORDS	STATUS NOTIFICATION	EVENT DATABASE MANAGEMENT	CONTROL SET DATABASE MGMT	NOTARY	OBJECT REGISTRY	CERTIFICATE CREATION	...
OVERSEEING PROCESS	CONFIRMATIONS	ROUTING DATABASE	GENERATE CONTROL SETS	SEAL GENERATOR	OBJECT IDENTIFIER ASSIGNMENT	REVOCATION LIST MAINTENANCE	...	...
MONITORING STATUS	UNCOMPLETED EVENTS RECORD	GENERATING REQUESTS	PROCESS CONTROL LOGIC	DIGITAL TIME STAMP	COPYRIGHT REGISTRATION	...	...	...
COMPLETE PROCESS DEFINITION	REQUIREMENTS GENERATION	REPLICATION	EVENT FLOW GENERATION	FINGERPRINT /WATERMARK	CONTROL SET REGISTRY	...	...	...
PROCESS CONTROL	REPORT GENERATION	PROPAGATION	ROUTING	OFFERS & COUNTER OFFERS	TEMPLATE REGISTRY	DIRECTOR DATABASE MANAGEMENT	...	...
INTERFACE(S) TO SETTLEMENT SERVICES	FUNDS TRANSFER	EVENT CONSEQUENCES	USAGE DATABASE MANAGEMENT	ARCHIVE	DATABASE QUERY & RESPONSE PROCESSING	...	...	...
CURRENCY CONVERSION	TAX CALCULATION & APPLICATION	ACCOUNT RECONCILIATION	BILL CREATION & PROCESSING	RIGHTS & PERMISSION DATABASE MANAGEMENT	ADVERTISING DATABASE MANAGEMENT	...	...	...
ACCOUNT CREATION & IDENTIFIER ASSIGNMENT	PAYMENT AGGREGATION	IDENTITY AUTHENTICATION	MARKET RESEARCH	TEMPLATE DATABASE MANAGEMENT	AUTOMATIC CLASS GENERATION	...	...	...
PAYMENT DISAGGREGATION	BUDGET PRE-AUTHORIZATION	ELECTRONIC CURRENCY CREATION	NEGOTIATION	COMMERCE MGMT LANGUAGE PROCESSING	AUTOMATIC CLASS ASSIGNMENT	...	...	...
:	:	:	RIGHTS MANAGEMENT LANGUAGE PROCESSING	:	:	:	:	:



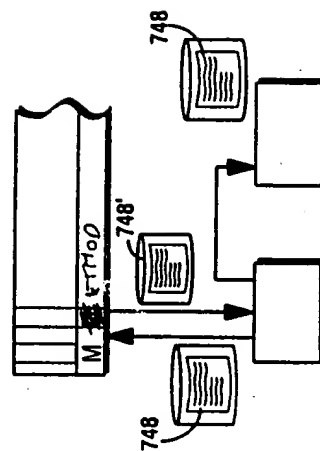
**FIG. 17E-1**  
Intermediation  
Model



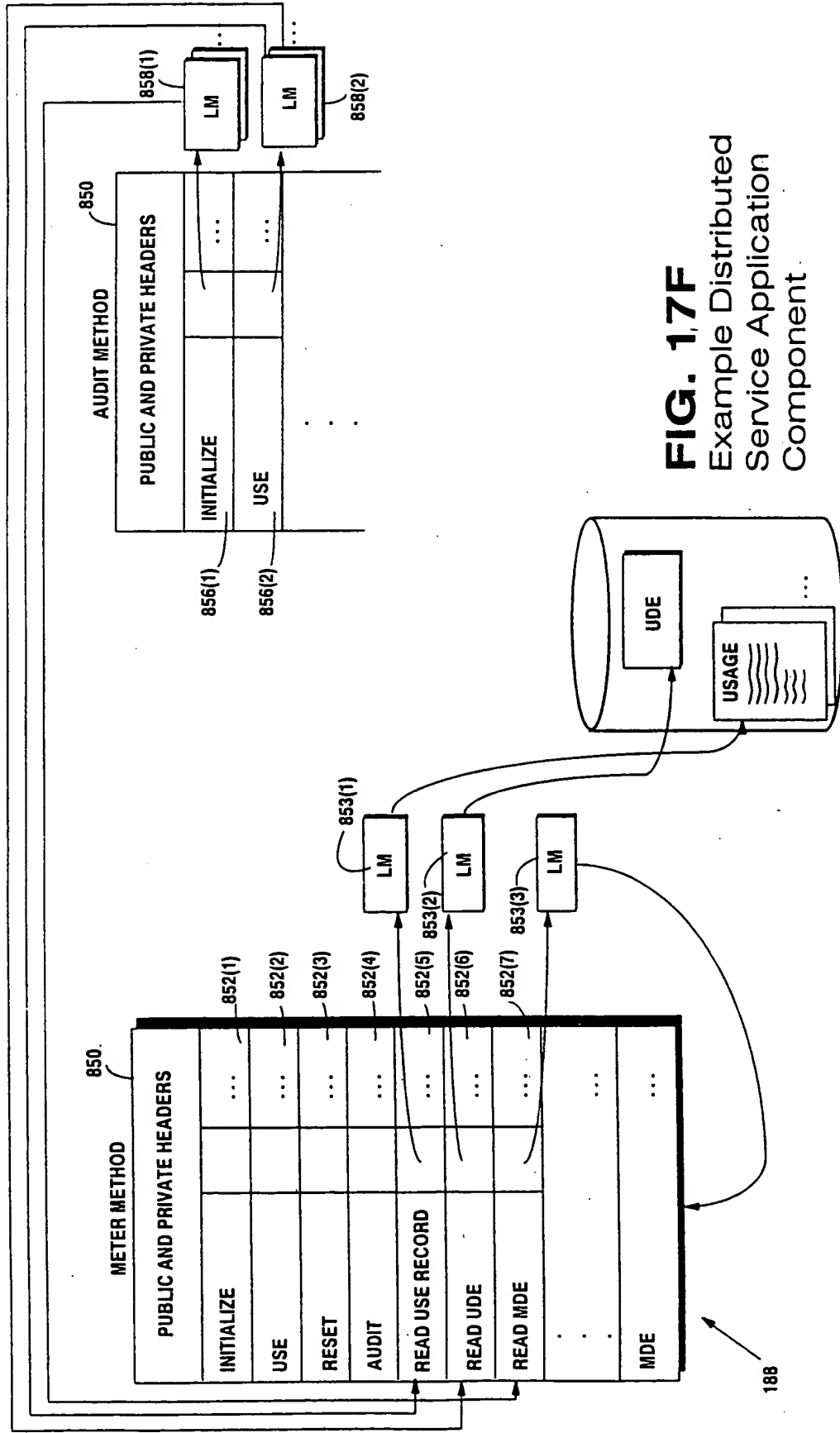
**FIG. 17E-2**  
Authentication to Proceed



**FIG. 17E-3**  
Notification Model

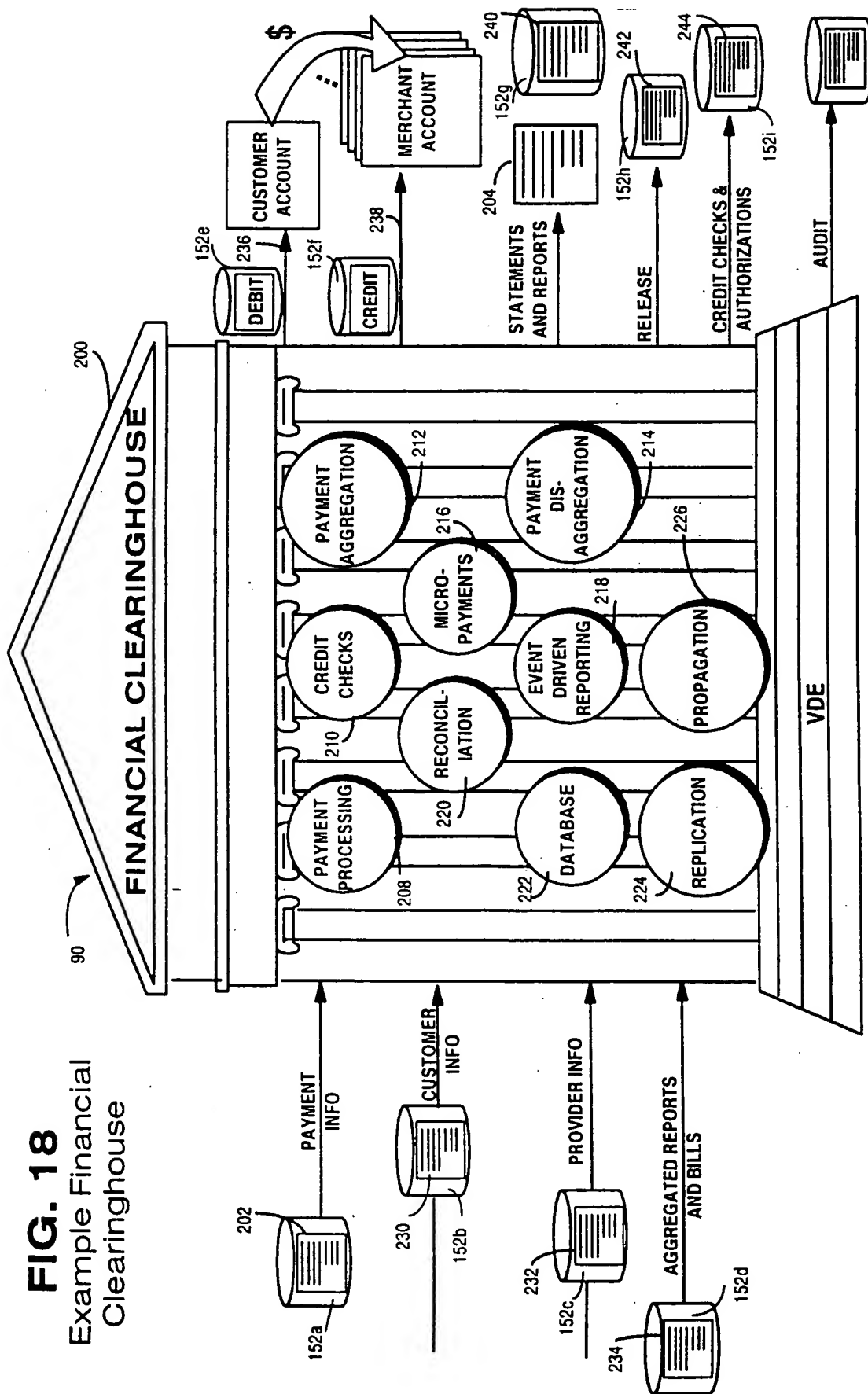


**FIG. 17E-4**  
Prior Authorization Model

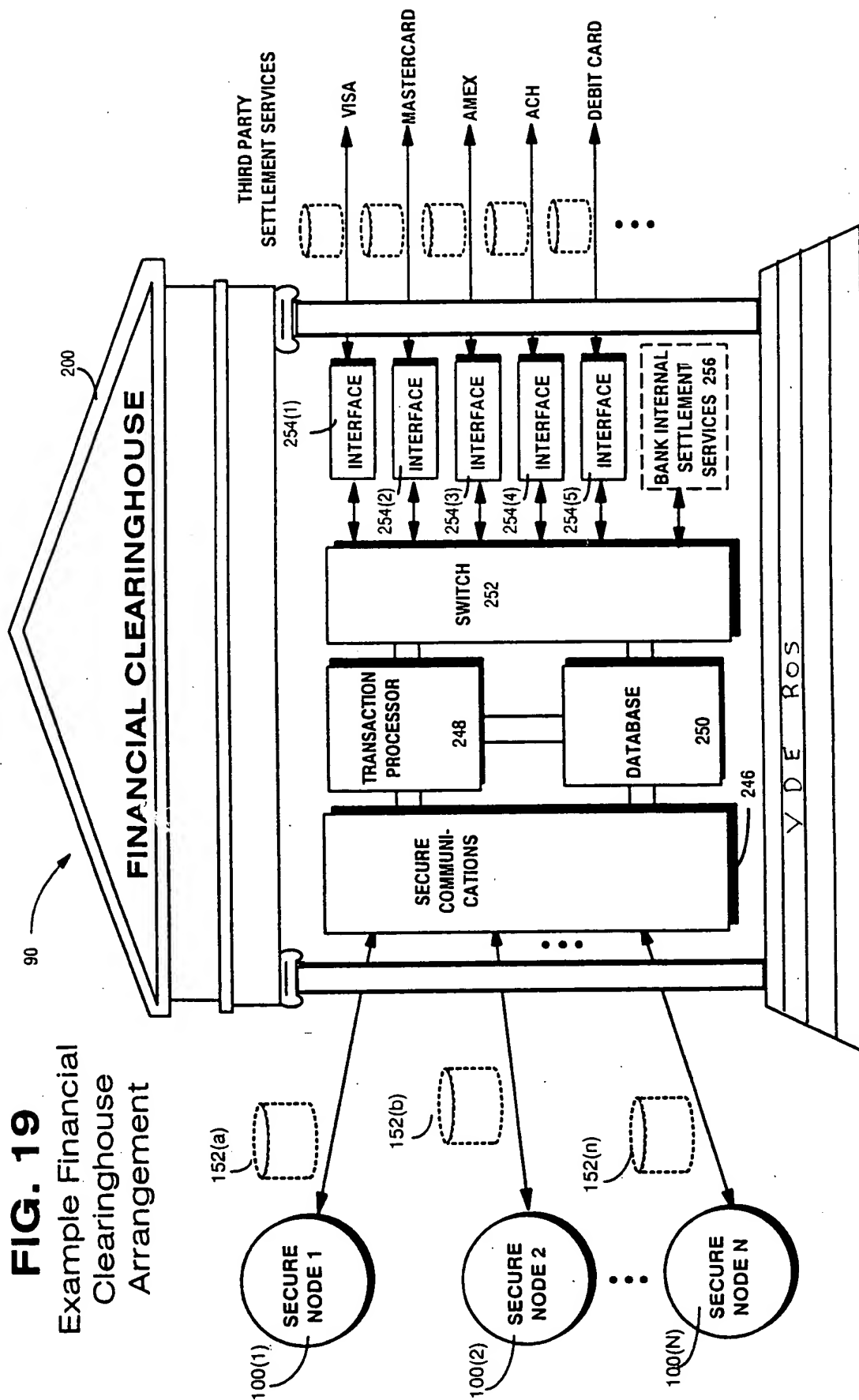


**FIG. 17F**  
Example Distributed  
Service Application  
Component

**FIG. 18**  
Example Financial  
Clearinghouse



**FIG. 19**  
Example Financial  
Clearinghouse  
Arrangement



**FIG. 20** Example Financial Clearing Process

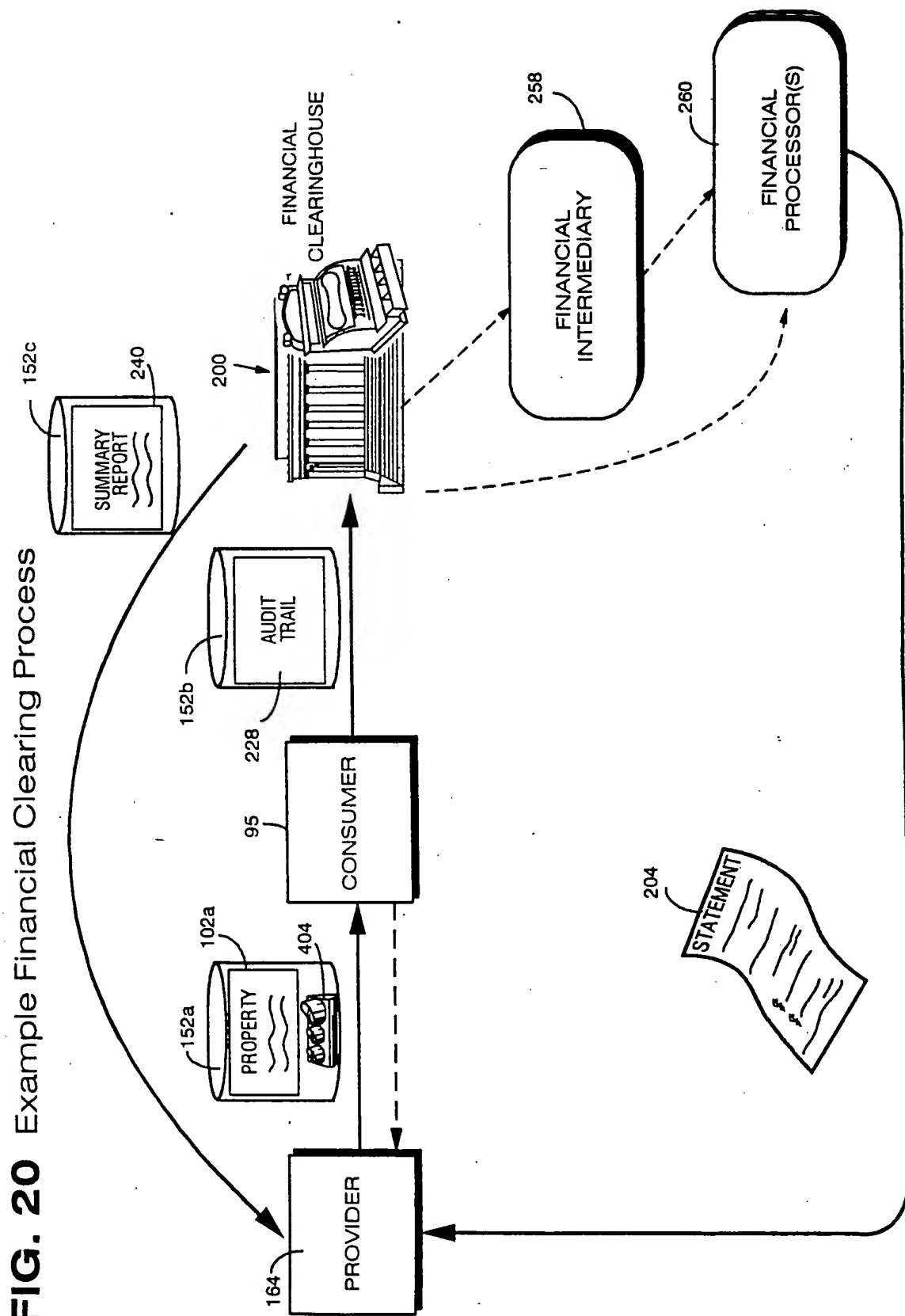


FIG. 20A

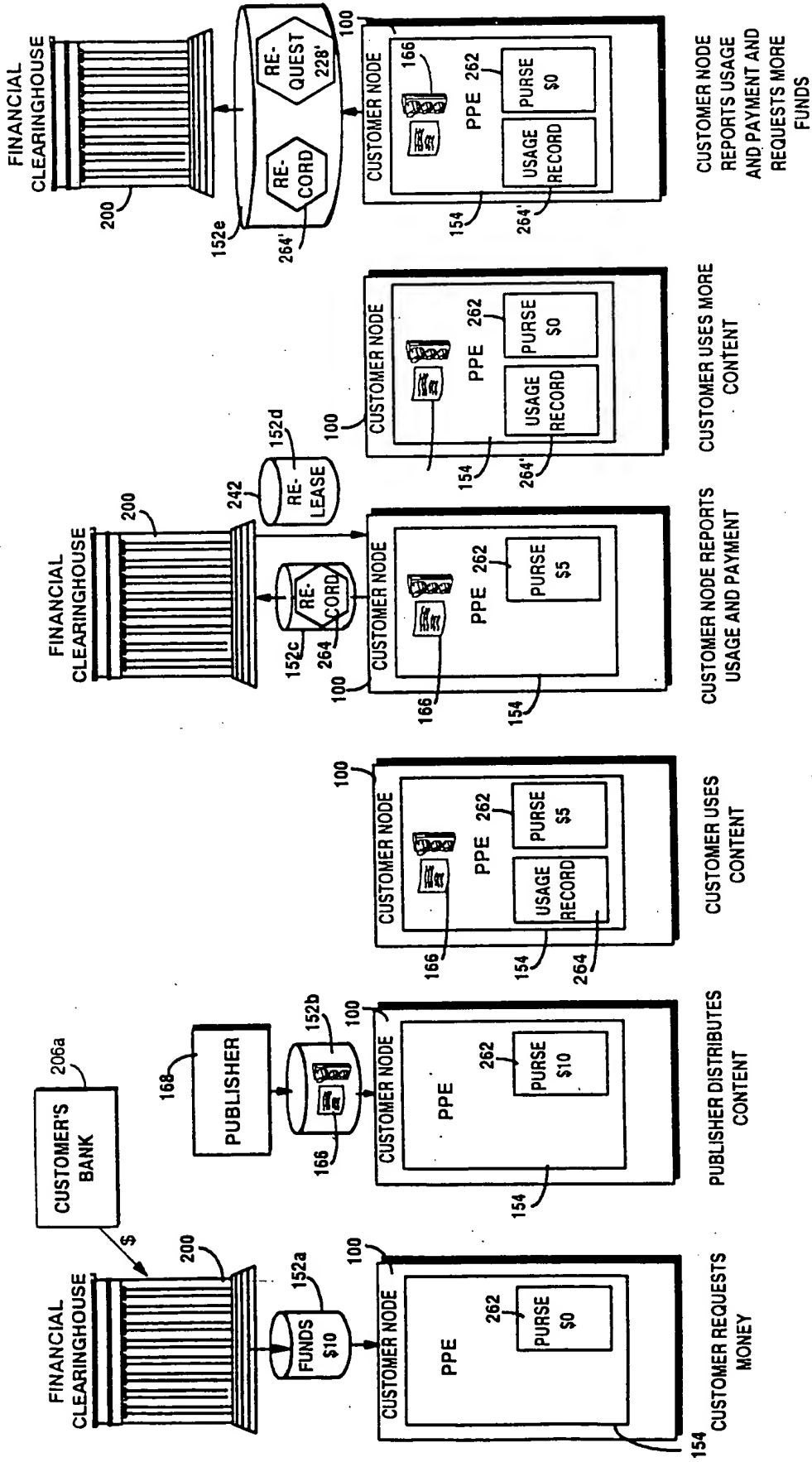


FIG. 20A FIG. 20B FIG. 20C FIG. 20D FIG. 20E FIG. 20F

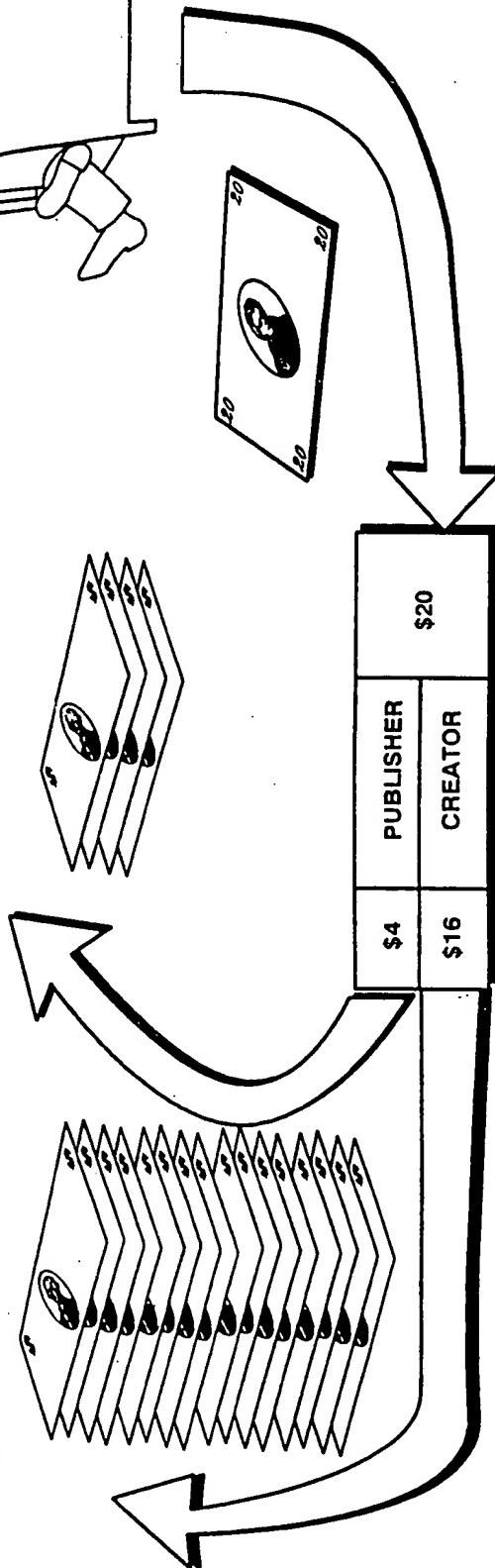
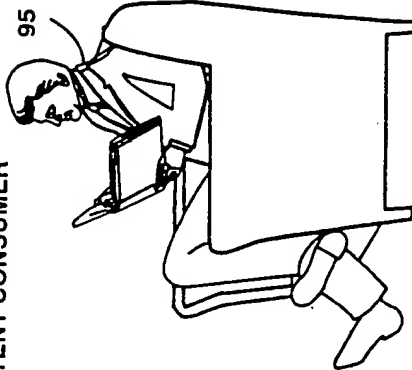
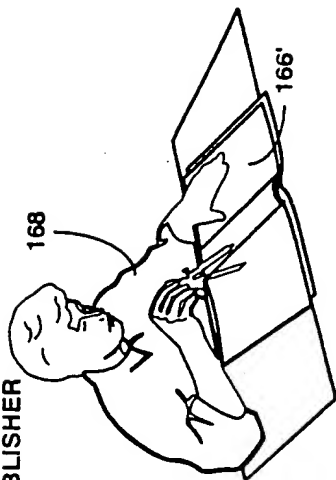
EXAMPLE FINANCIAL CLEARING ACTIVITIES



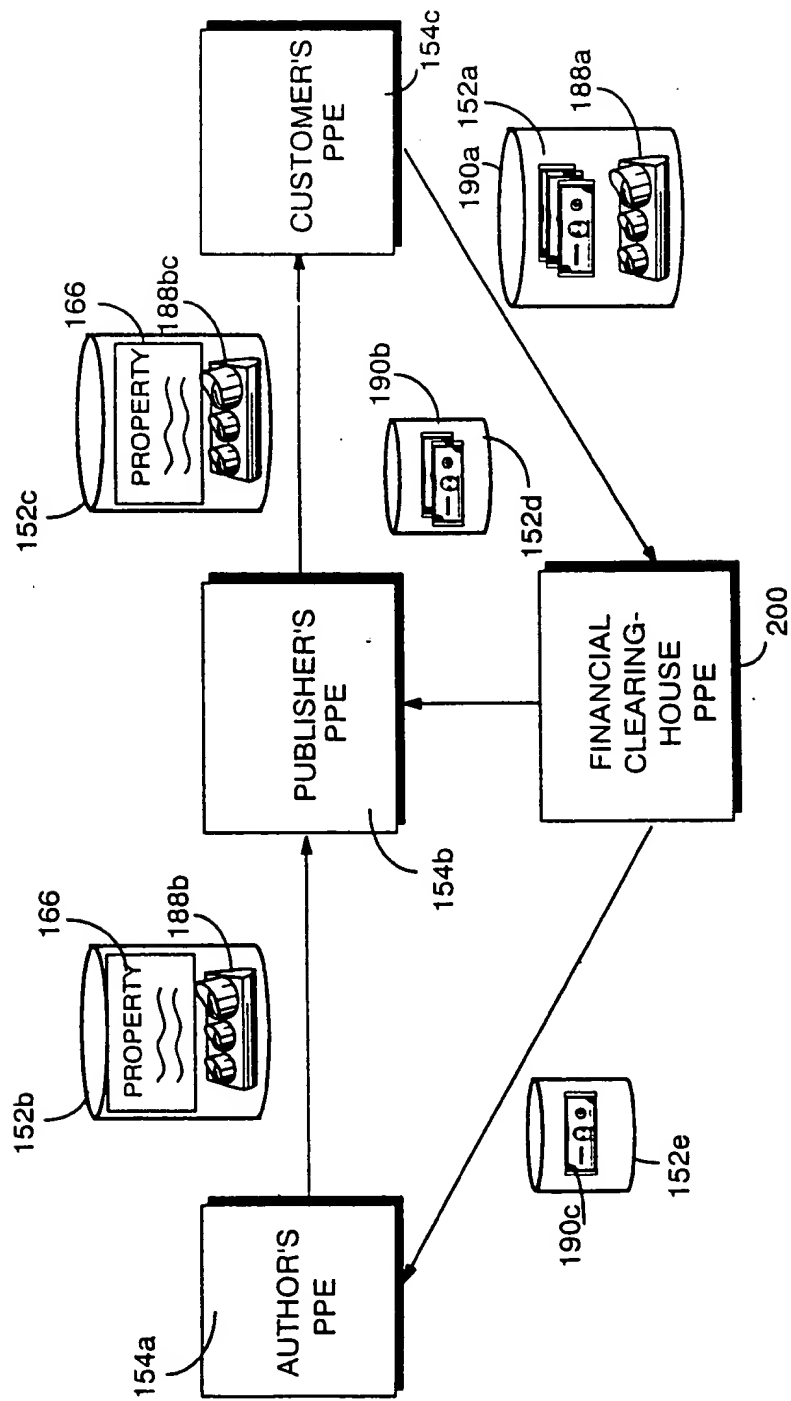
CONTENT CREATOR

CONTENT PUBLISHER

CONTENT CONSUMER

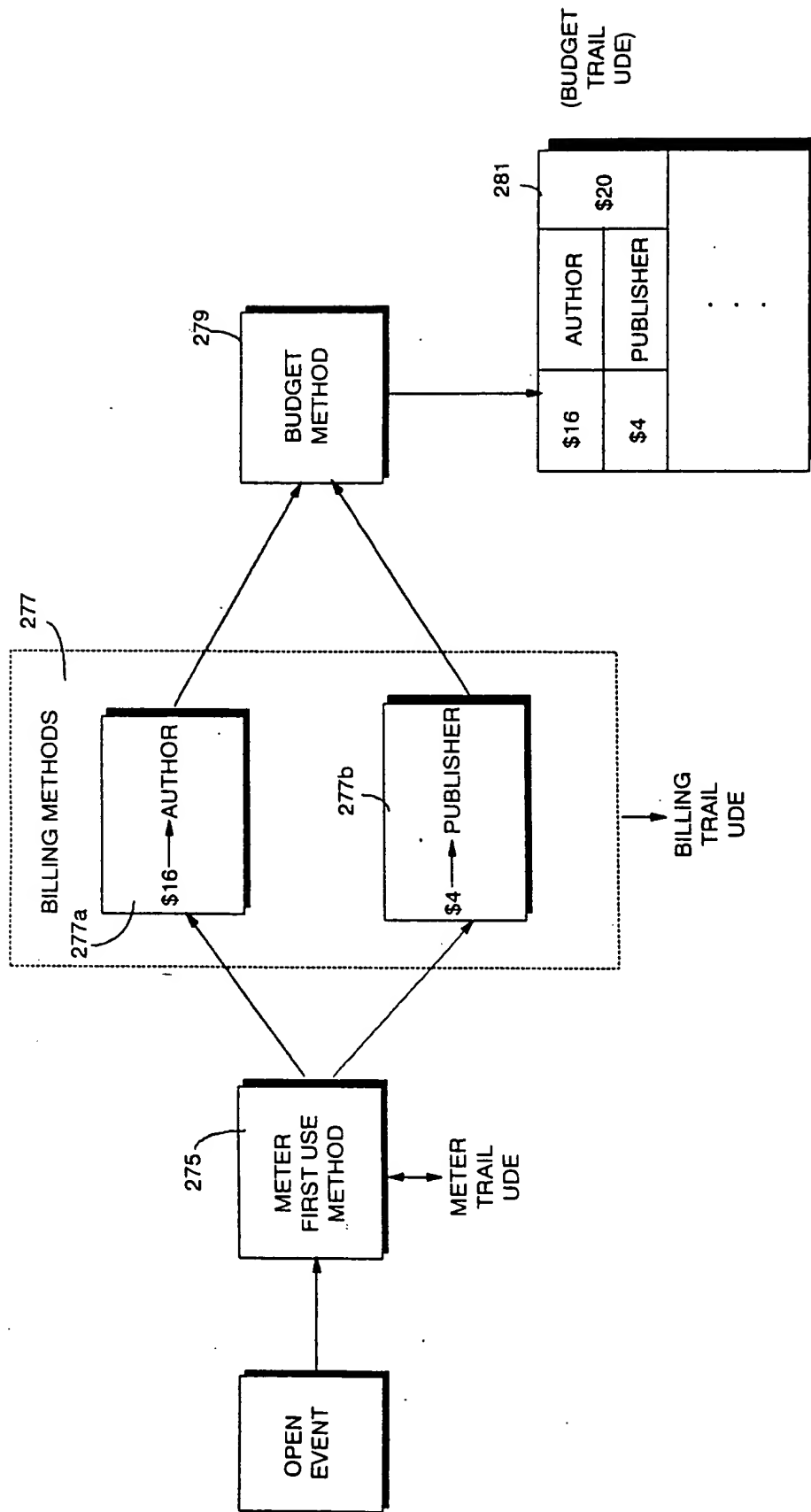


**FIG. 21** Example Payment Disaggregation



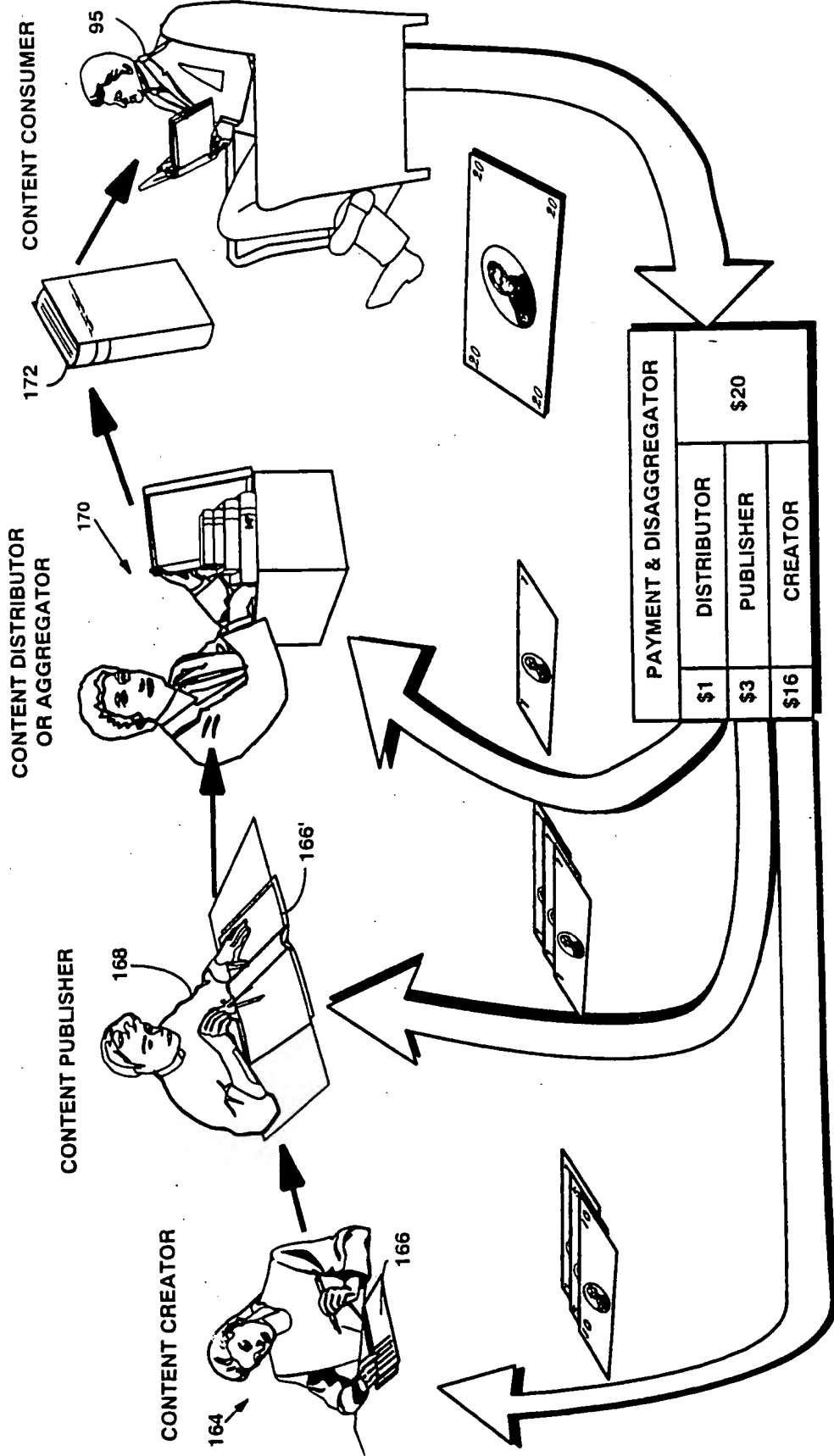
**FIG. 22** PAYMENT AND REDISTRIBUTION EXAMPLE

FIG. 22A is a block diagram illustrating a user node disaggregation example. The diagram shows the flow of data from an OPEN EVENT to a METER FIRST USE METHOD, which then branches into BILLING METHODS (AUTHOR and PUBLISHER) and a BUDGET METHOD. The BILLING METHODS section includes a table for BILLING TRAIL UDE and a table for BUDGET TRAIL UDE.



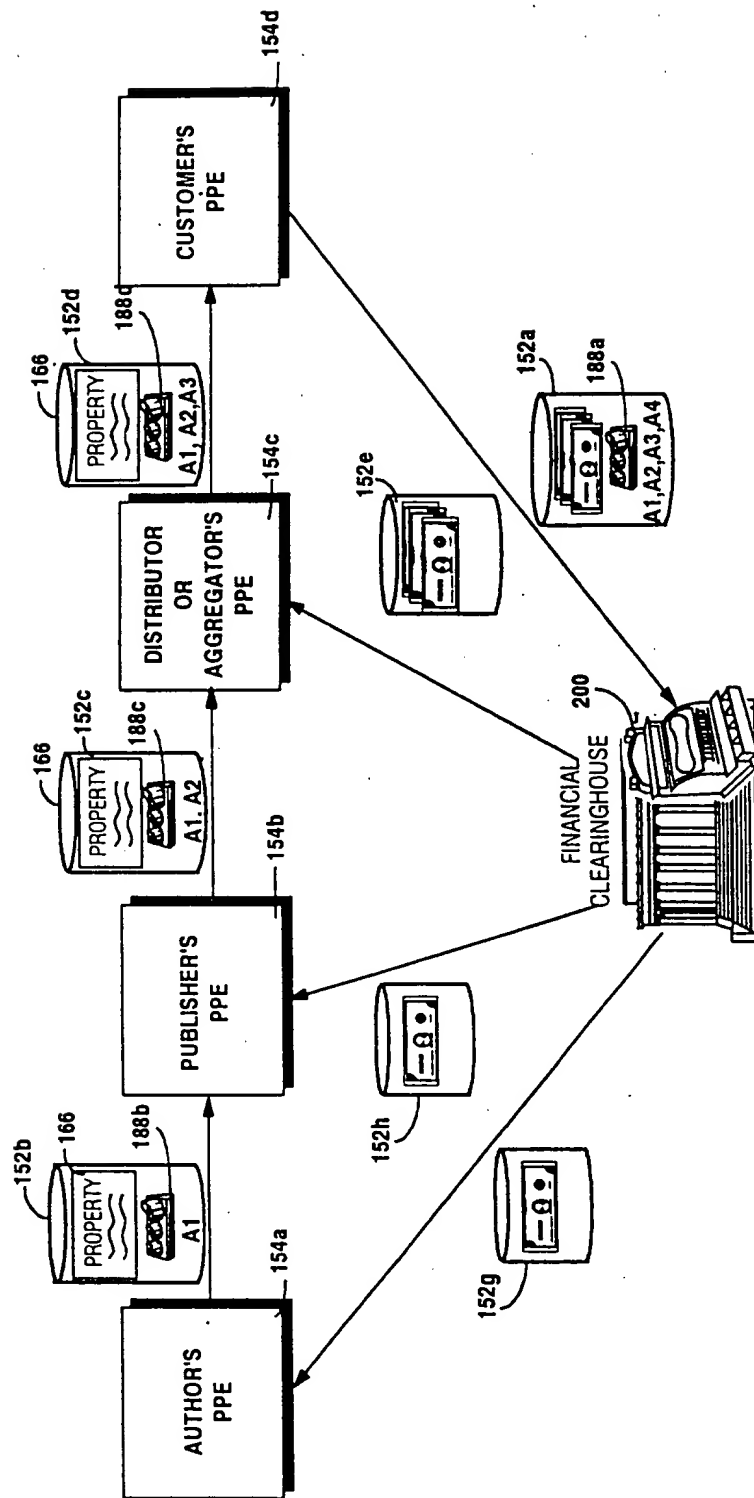
**FIG. 22A** User Node Disaggregation Example

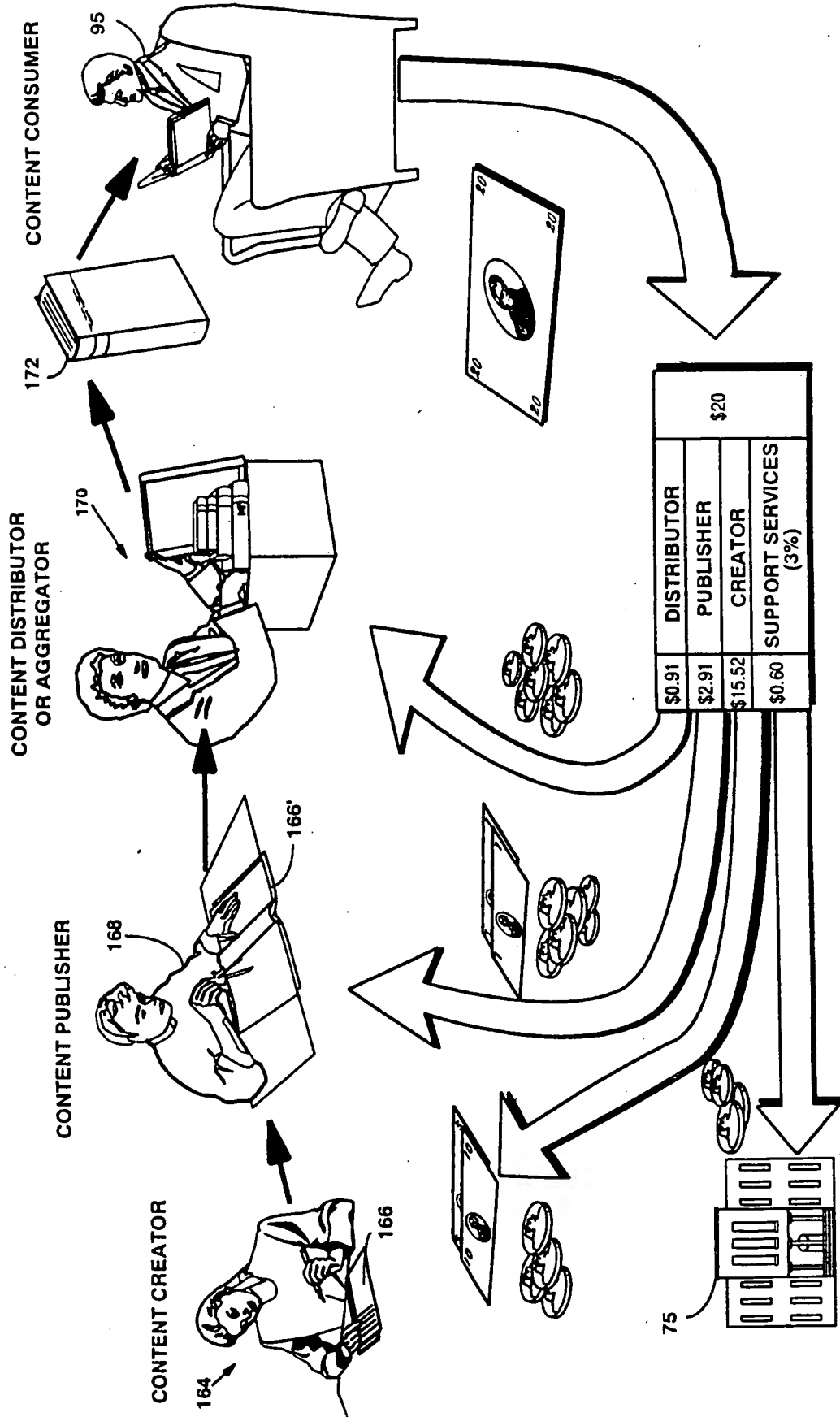
FIG. 23 is a diagram illustrating a payment disaggregation process. The diagram shows a flow of content from a Content Creator (164) to a Content Publisher (168), then to a Content Distributor or Aggregator (170), and finally to a Content Consumer (95). A Payment & Disaggregator (172) is shown receiving payment from the Content Consumer and distributing it to the Content Creator, Content Publisher, and Content Distributor. The Payment & Disaggregator is represented by a table showing the distribution of a \$20 payment: \$16 to the Creator, \$3 to the Publisher, and \$1 to the Distributor.



**FIG. 23** Payment Disaggregation

**FIG. 24**  
EXAMPLE PAYMENT  
AND REDISTRIBUTION  
SCENARIO





**FIG. 25** Example Payment Disaggregation

FIG. 26

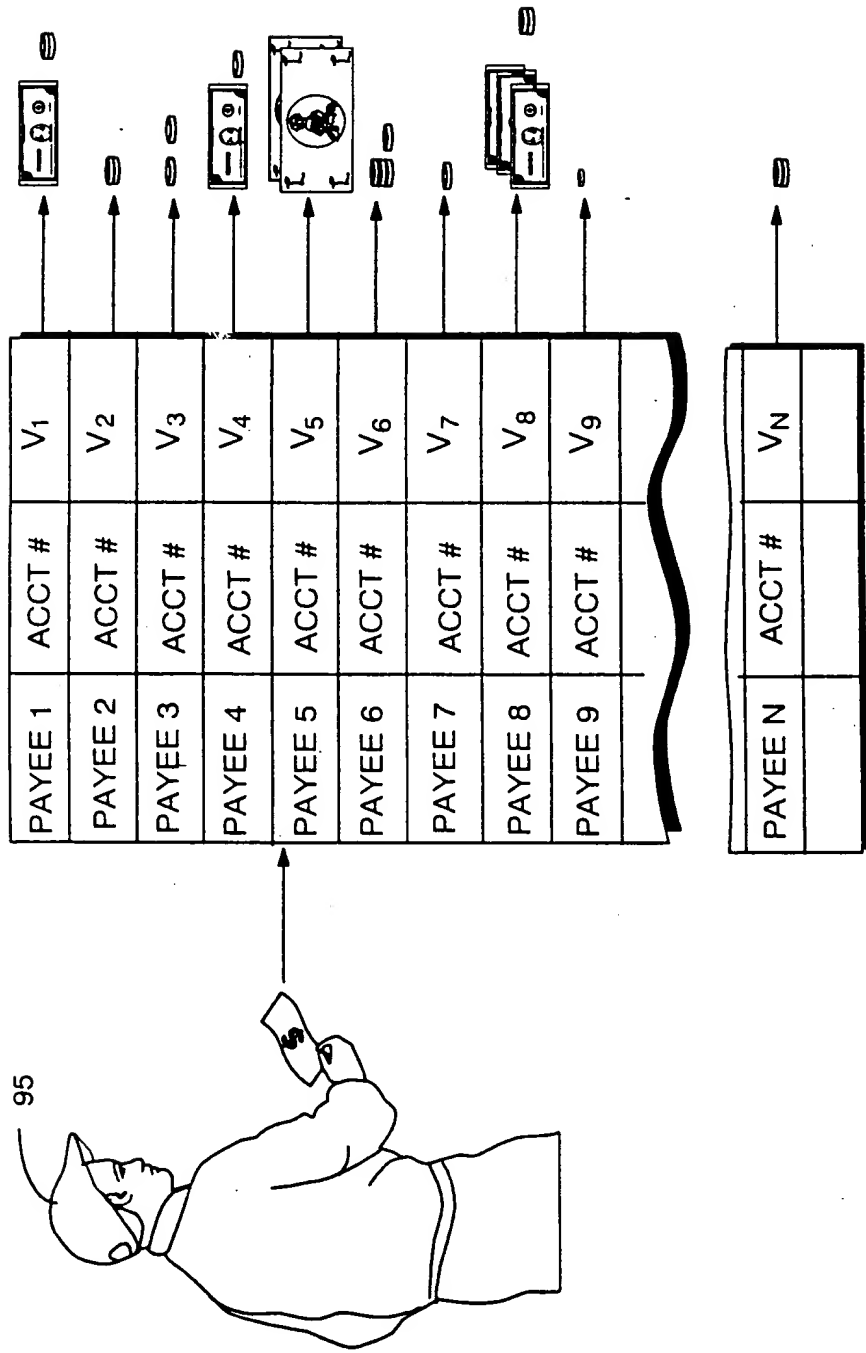
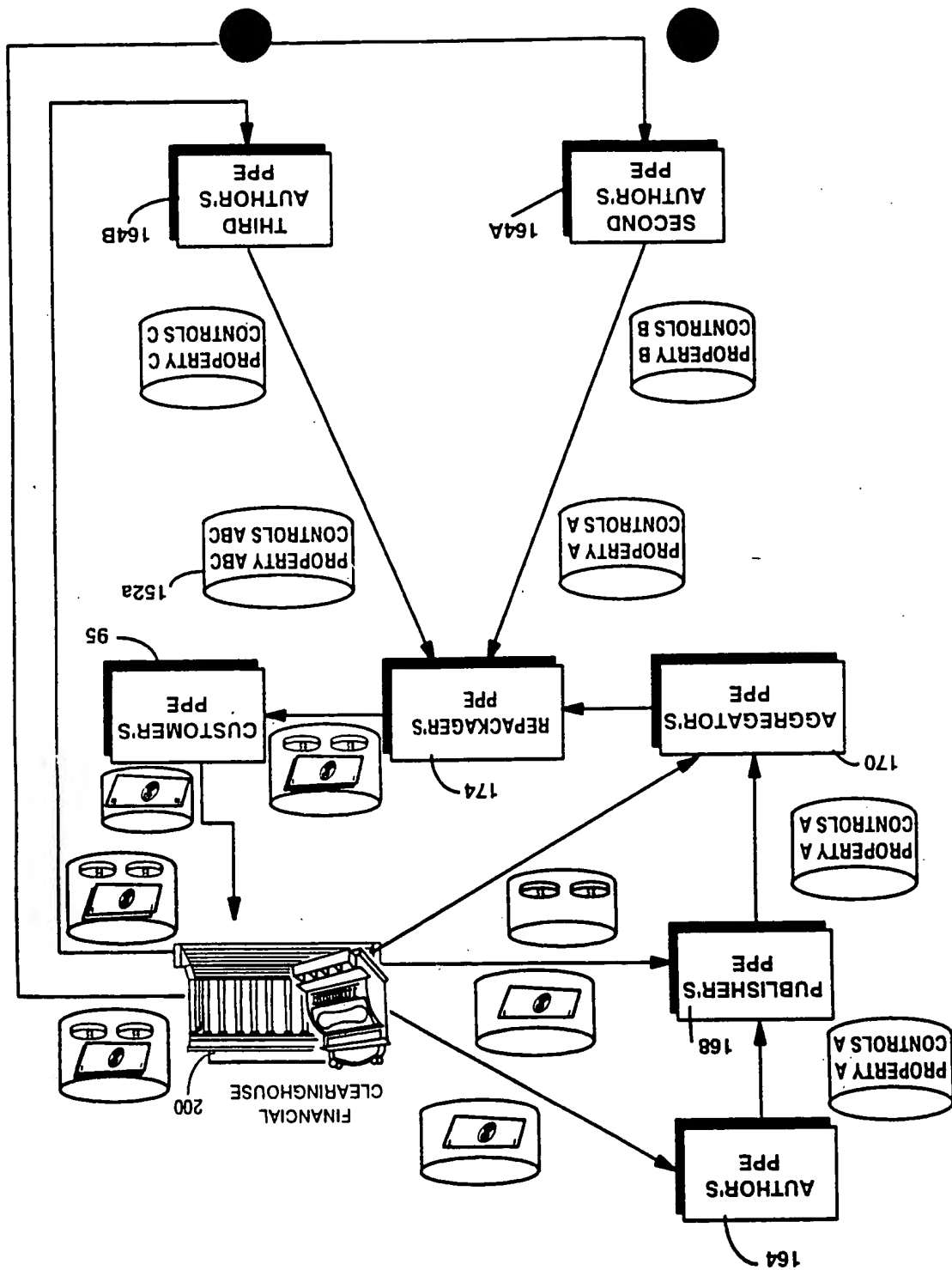


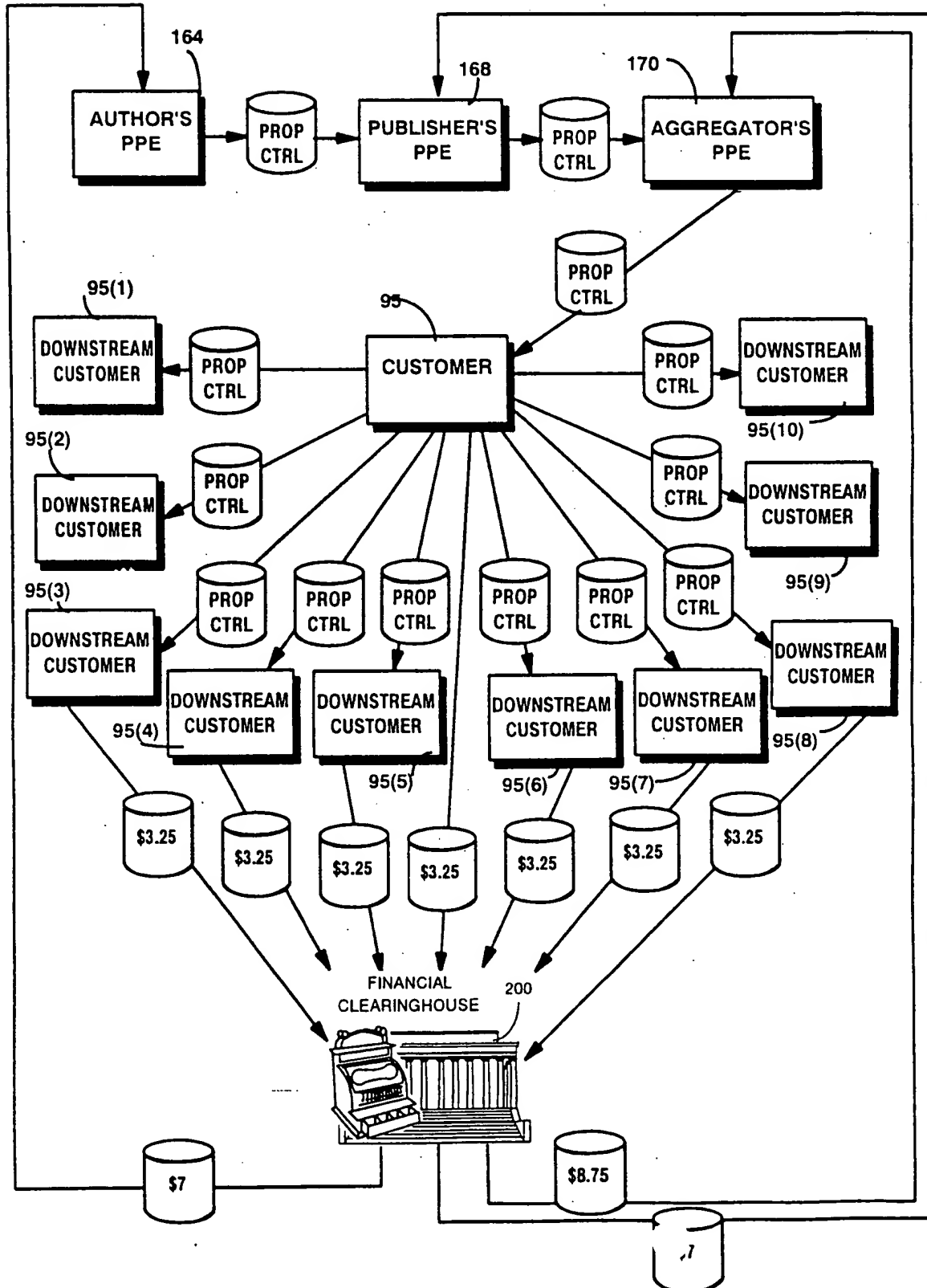
FIG. 26 PAYMENT DISAGGREGATION

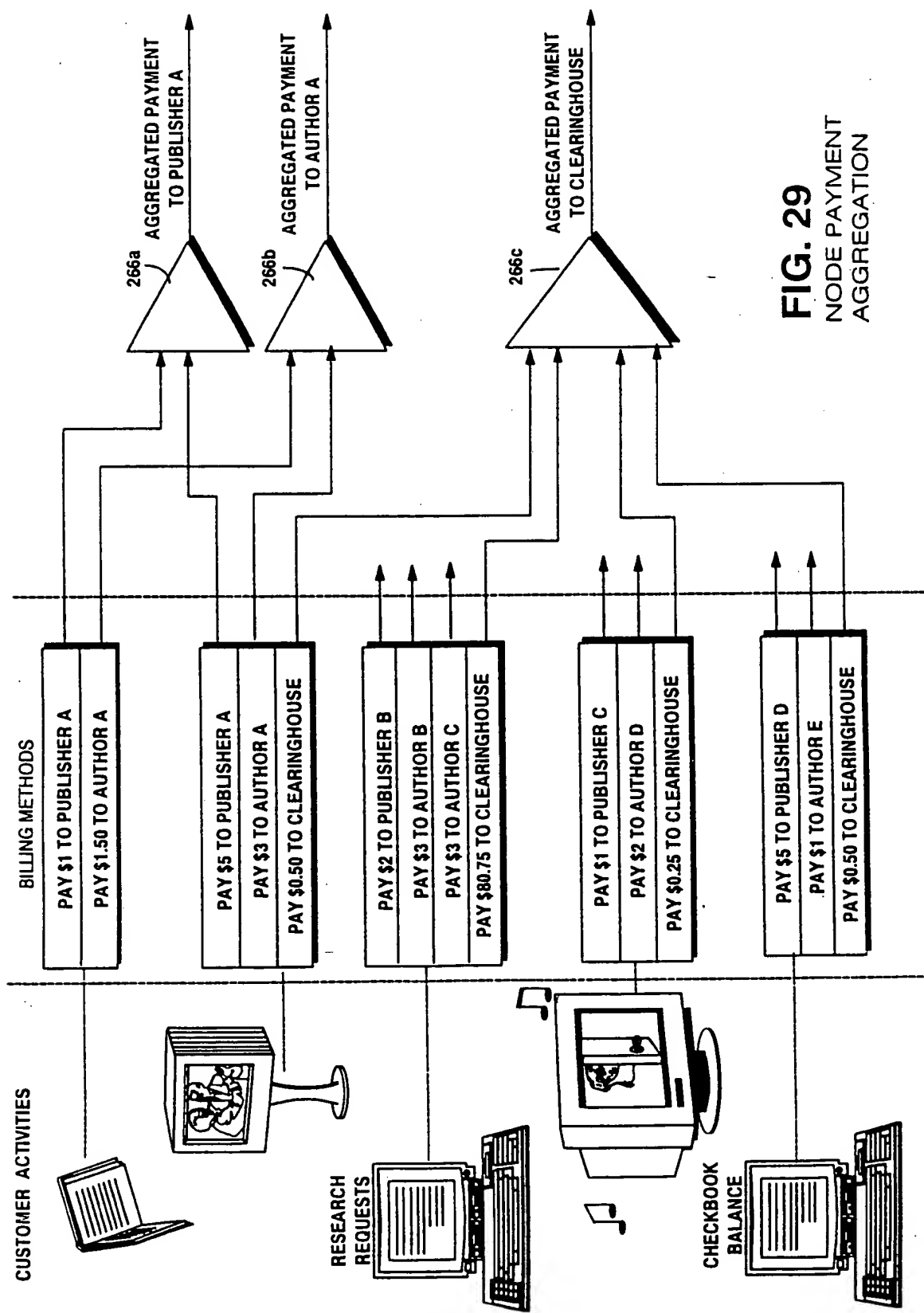
**FIG. 27**  
Example Payment and  
Redistribution Scenario



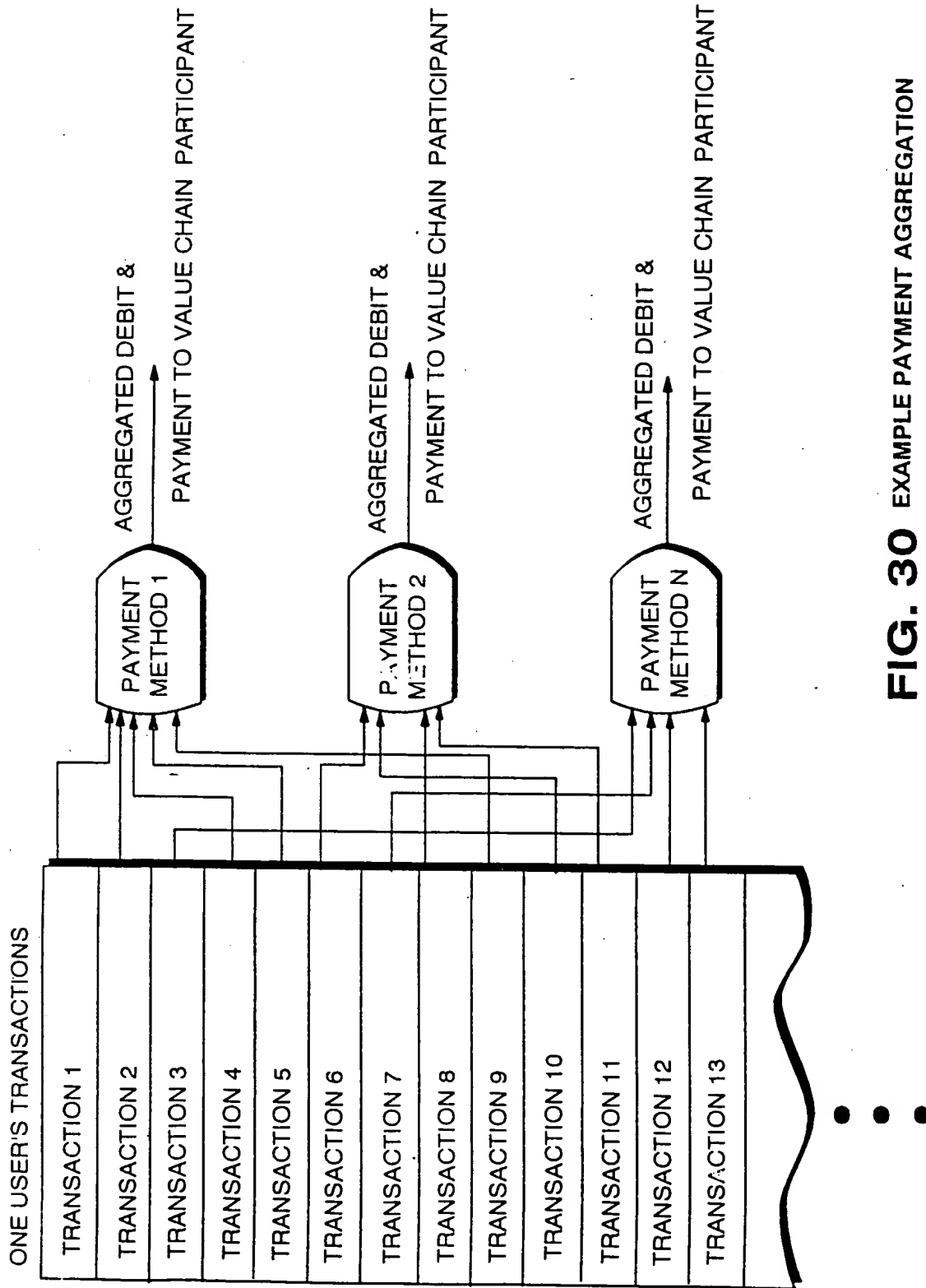


**FIG. 28** Example Super Distribution

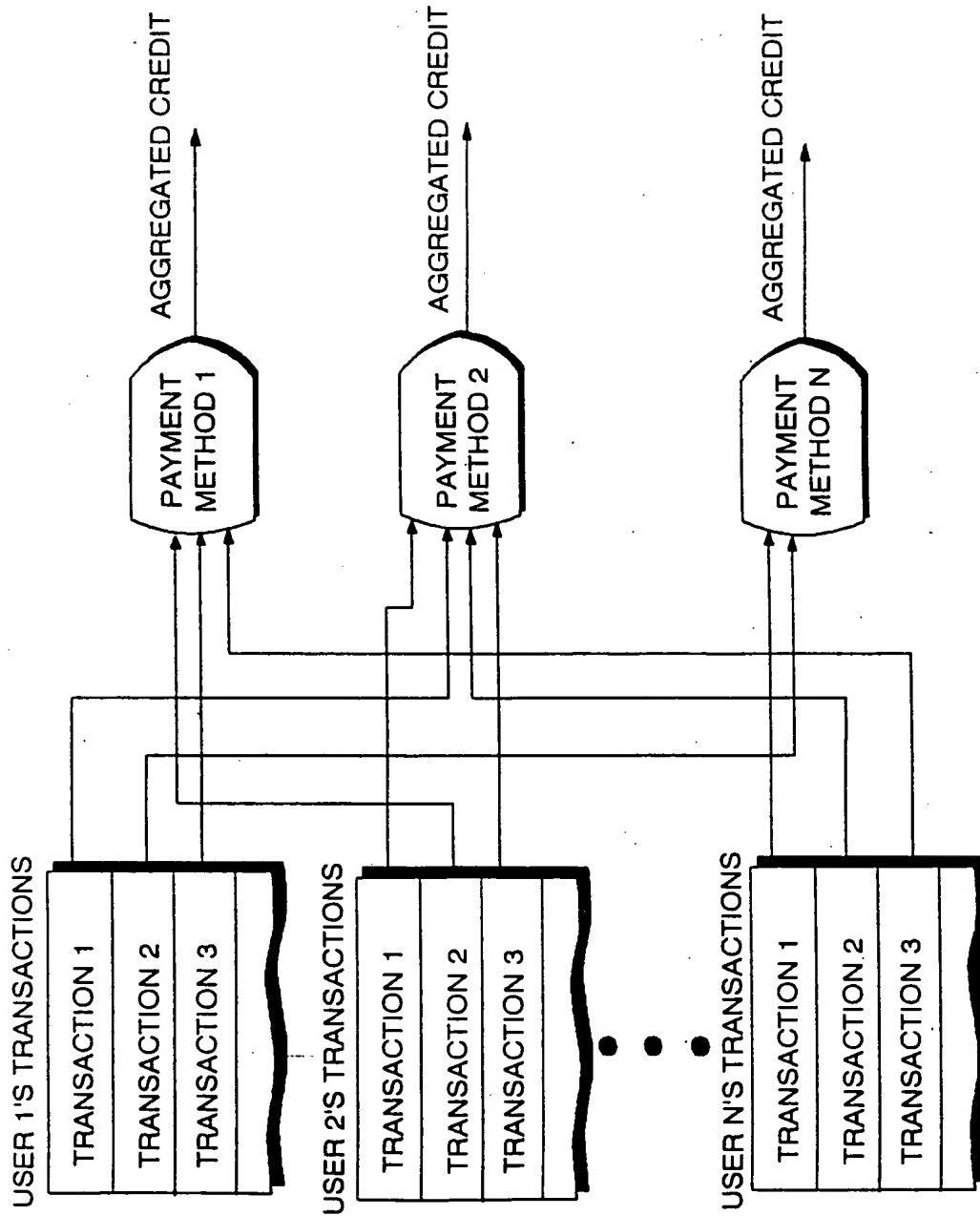




**FIG. 29**  
NODE PAYMENT  
AGGREGATION



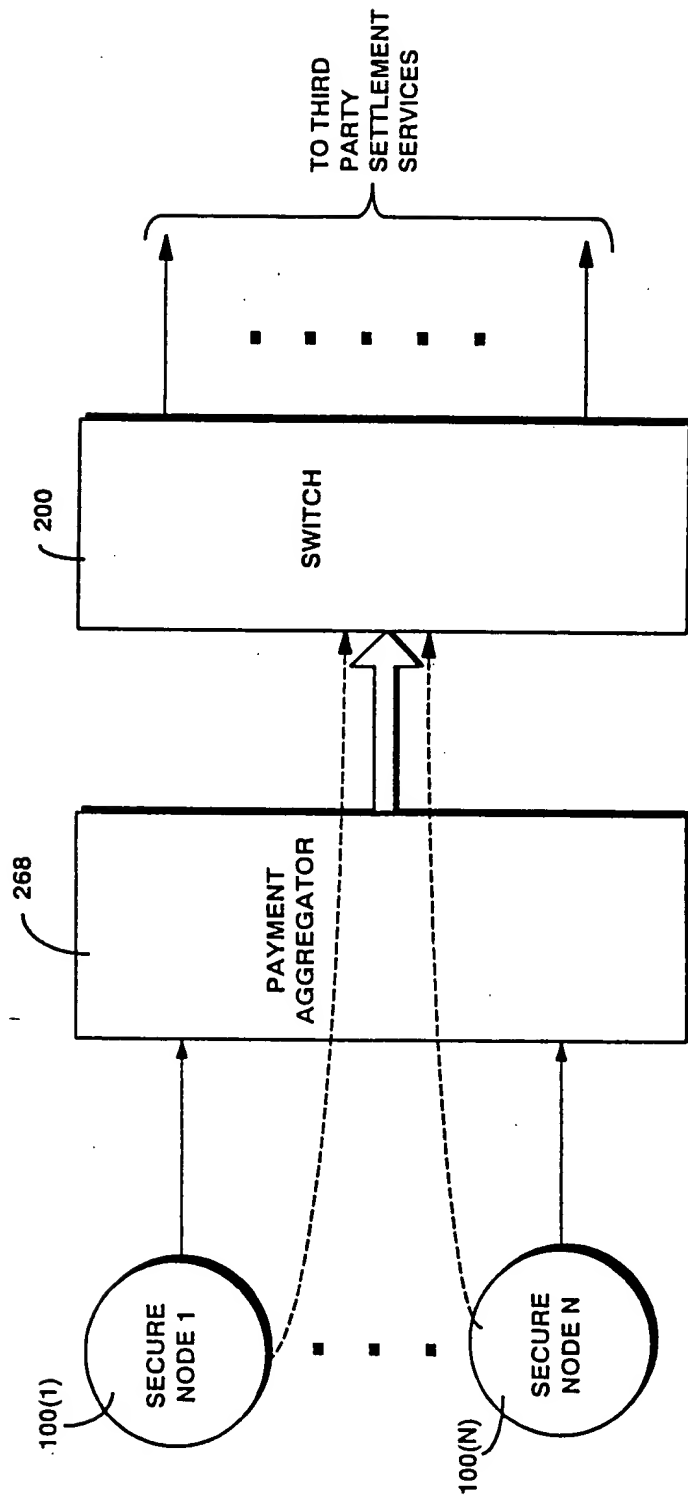
**FIG. 30** EXAMPLE PAYMENT AGGREGATION



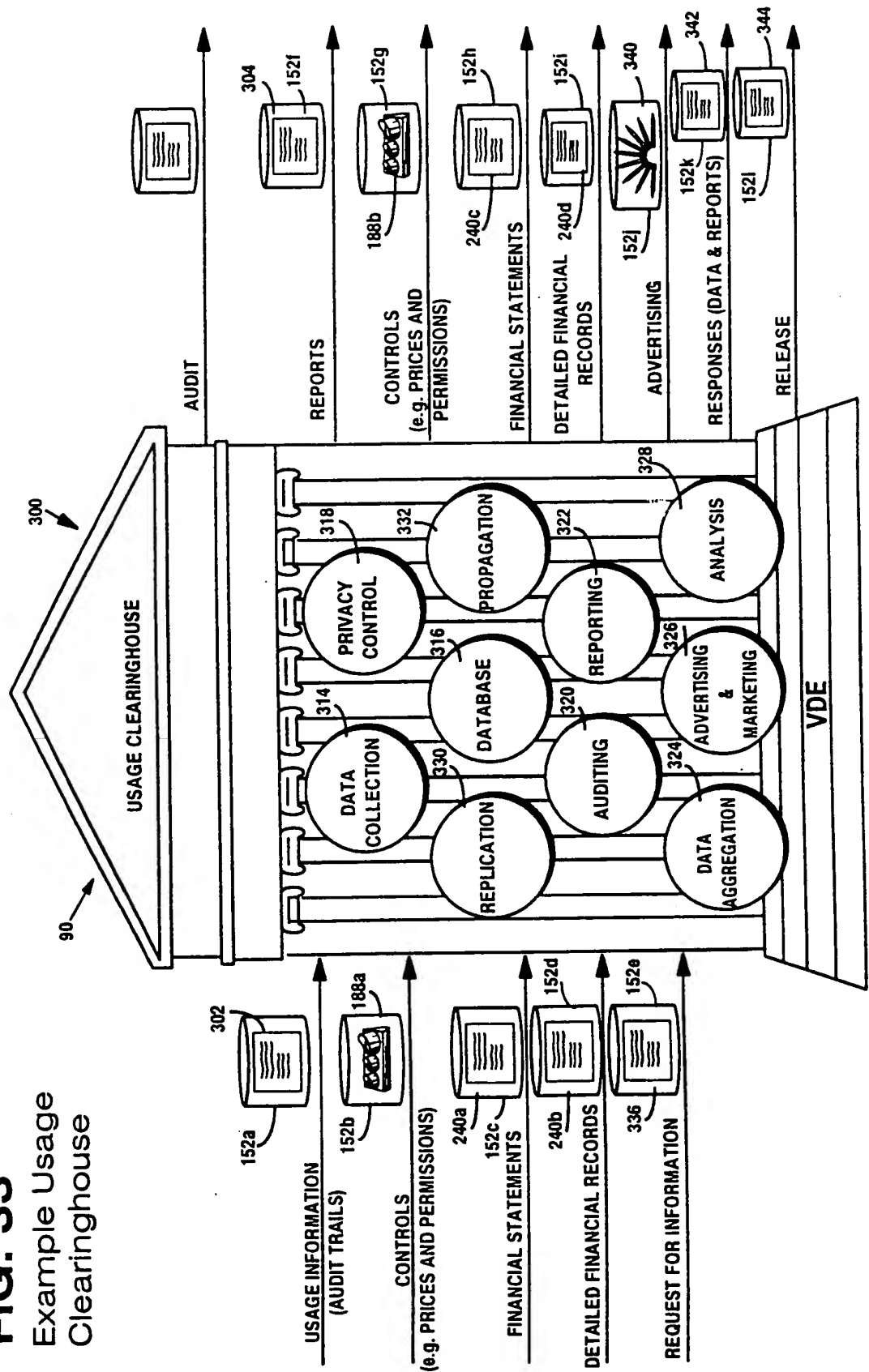
Financial Clearinghouse  
Example Payment Aggregation

**FIG. 31**

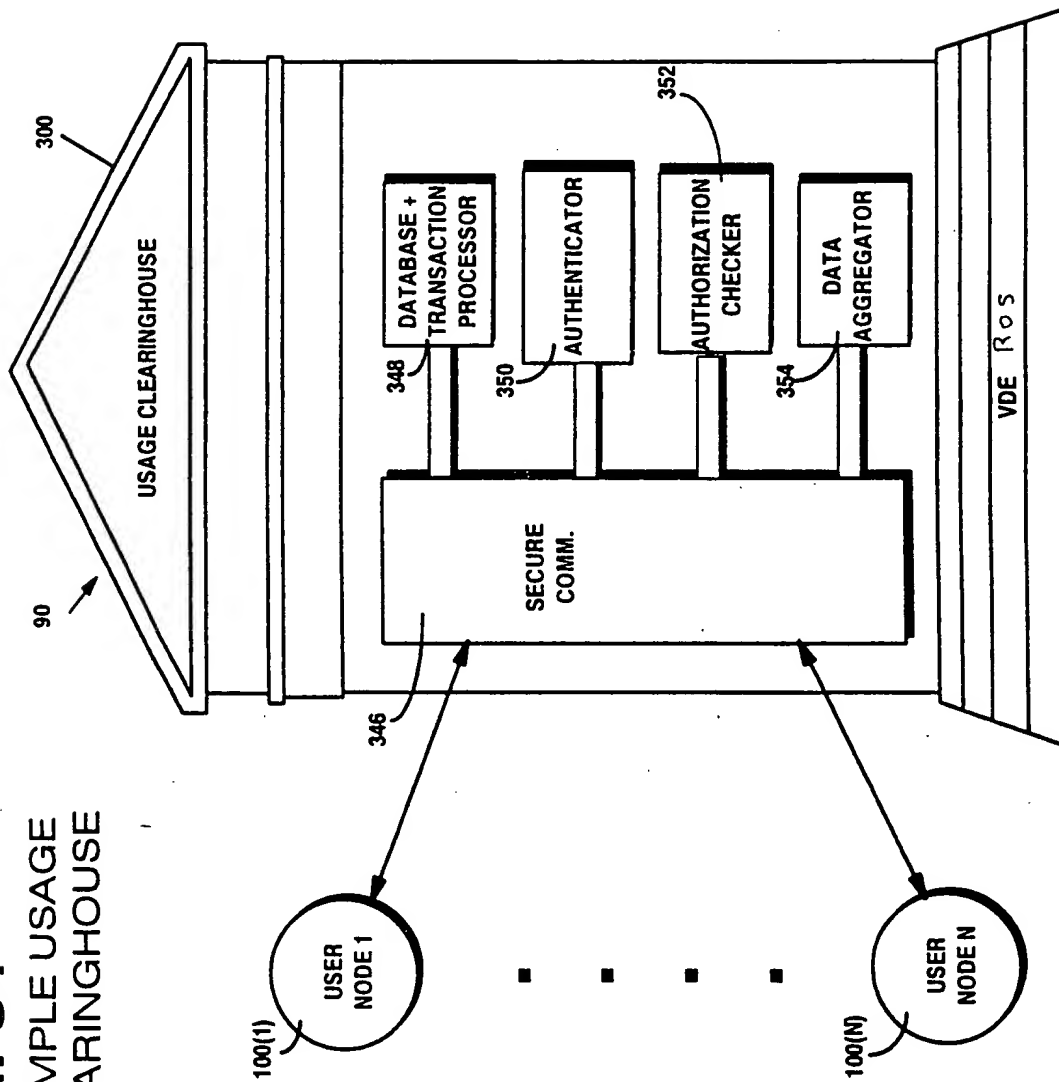
**FIG. 32** EXAMPLE FINANCIAL CLEARINGHOUSE ARRANGEMENT



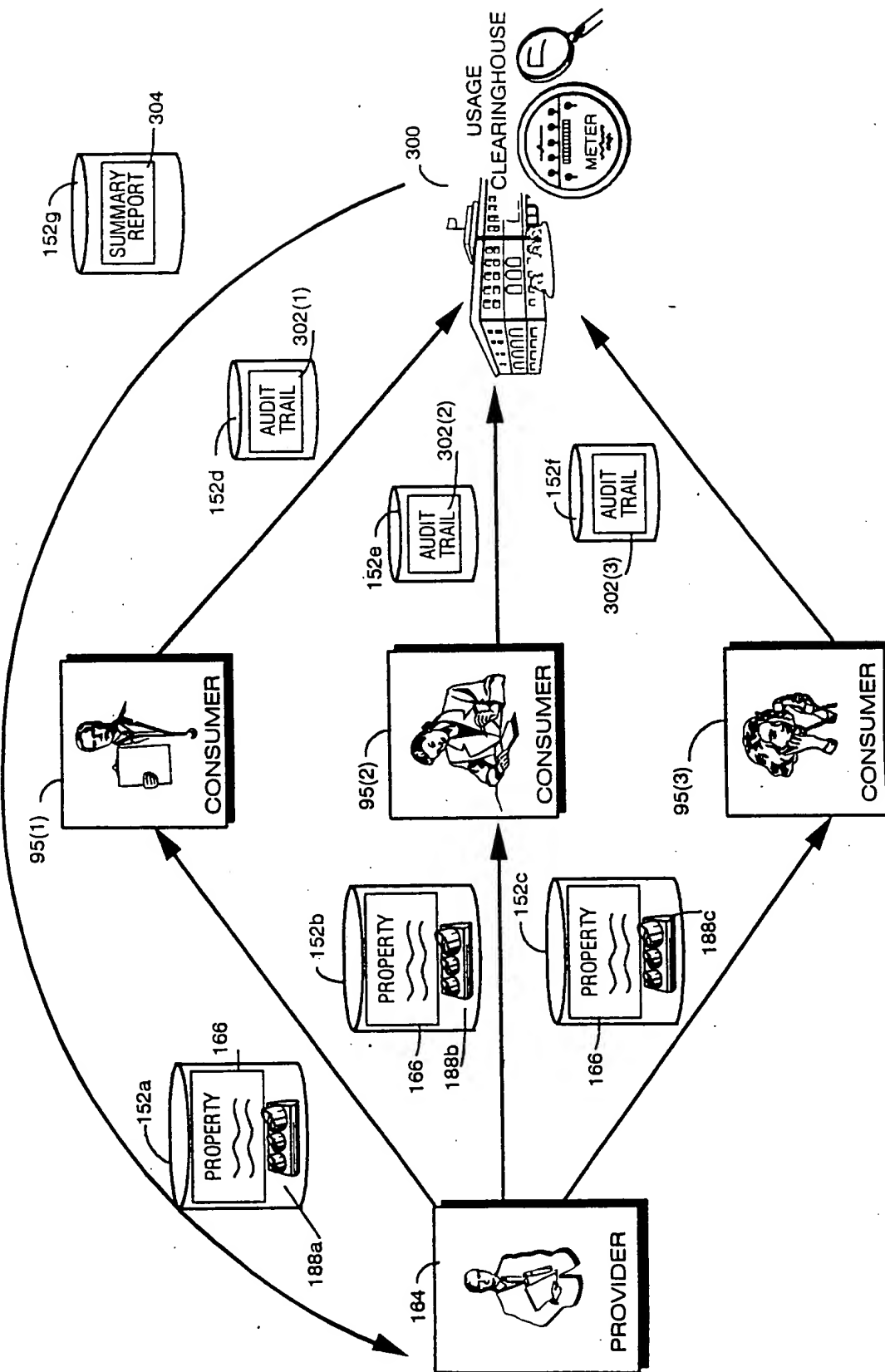
**FIG. 33**  
Example Usage  
Clearinghouse



**FIG. 34**  
EXAMPLE USAGE  
CLEARINGHOUSE

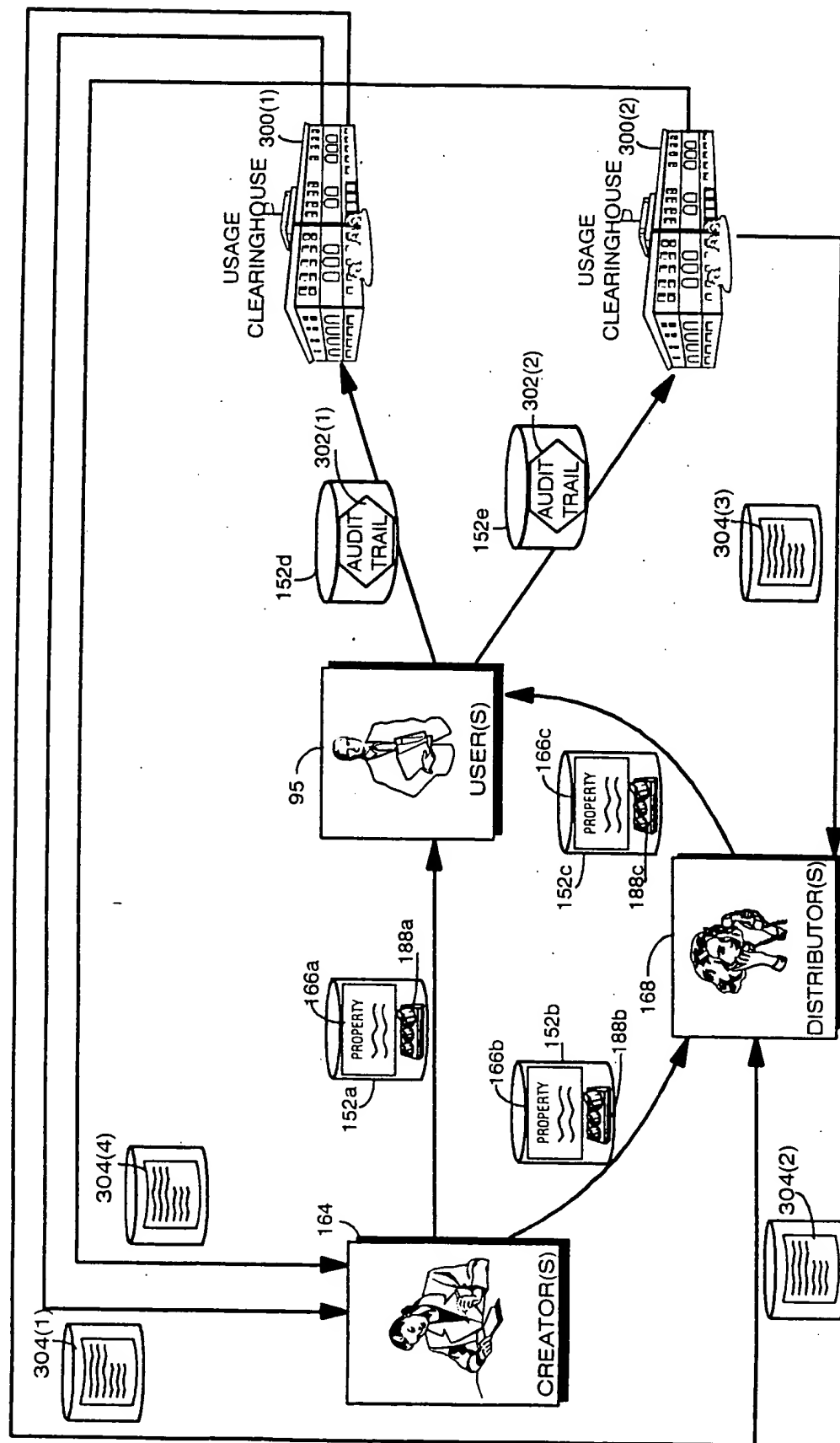


**FIG. 35** Example Usage Clearing Process

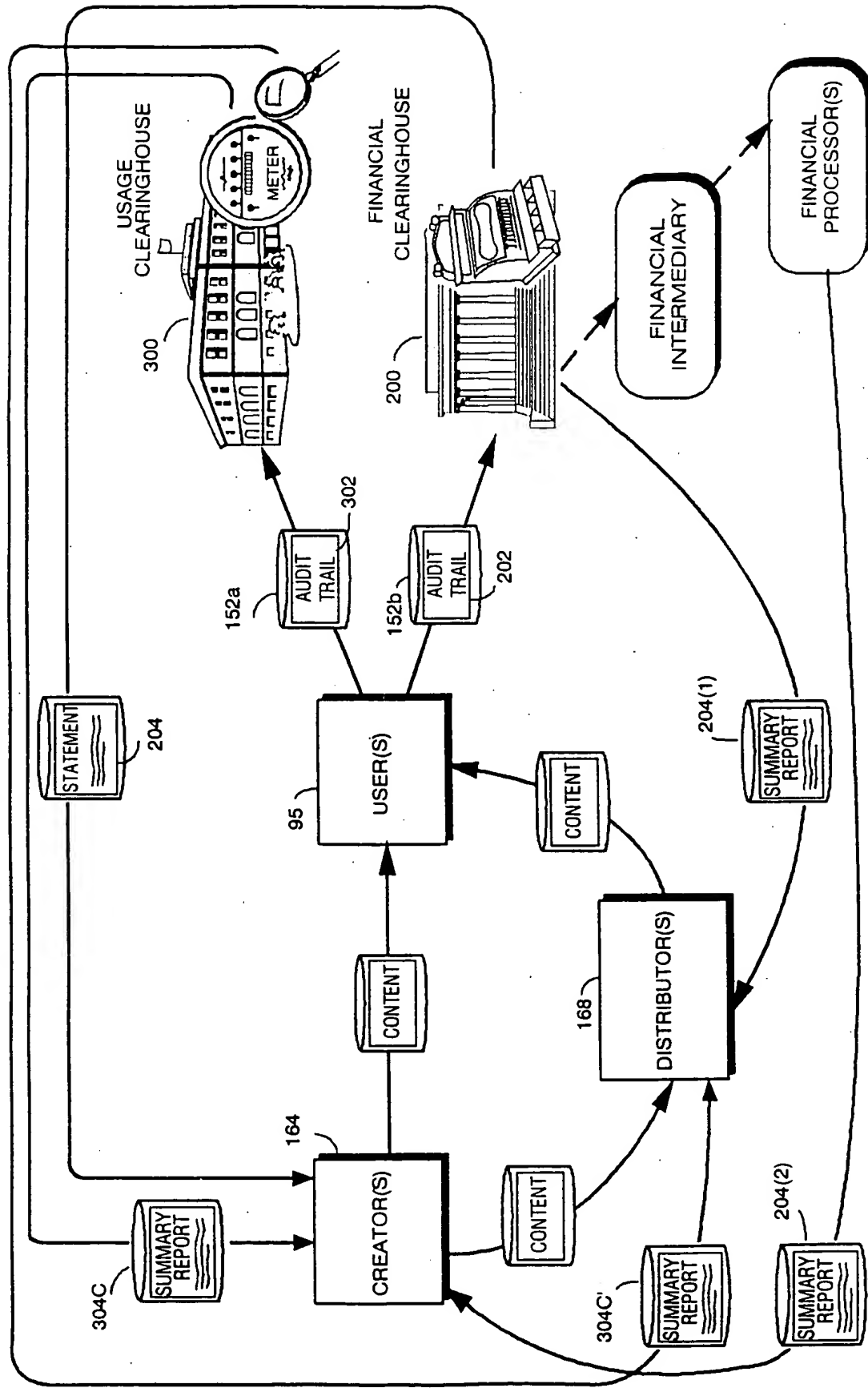




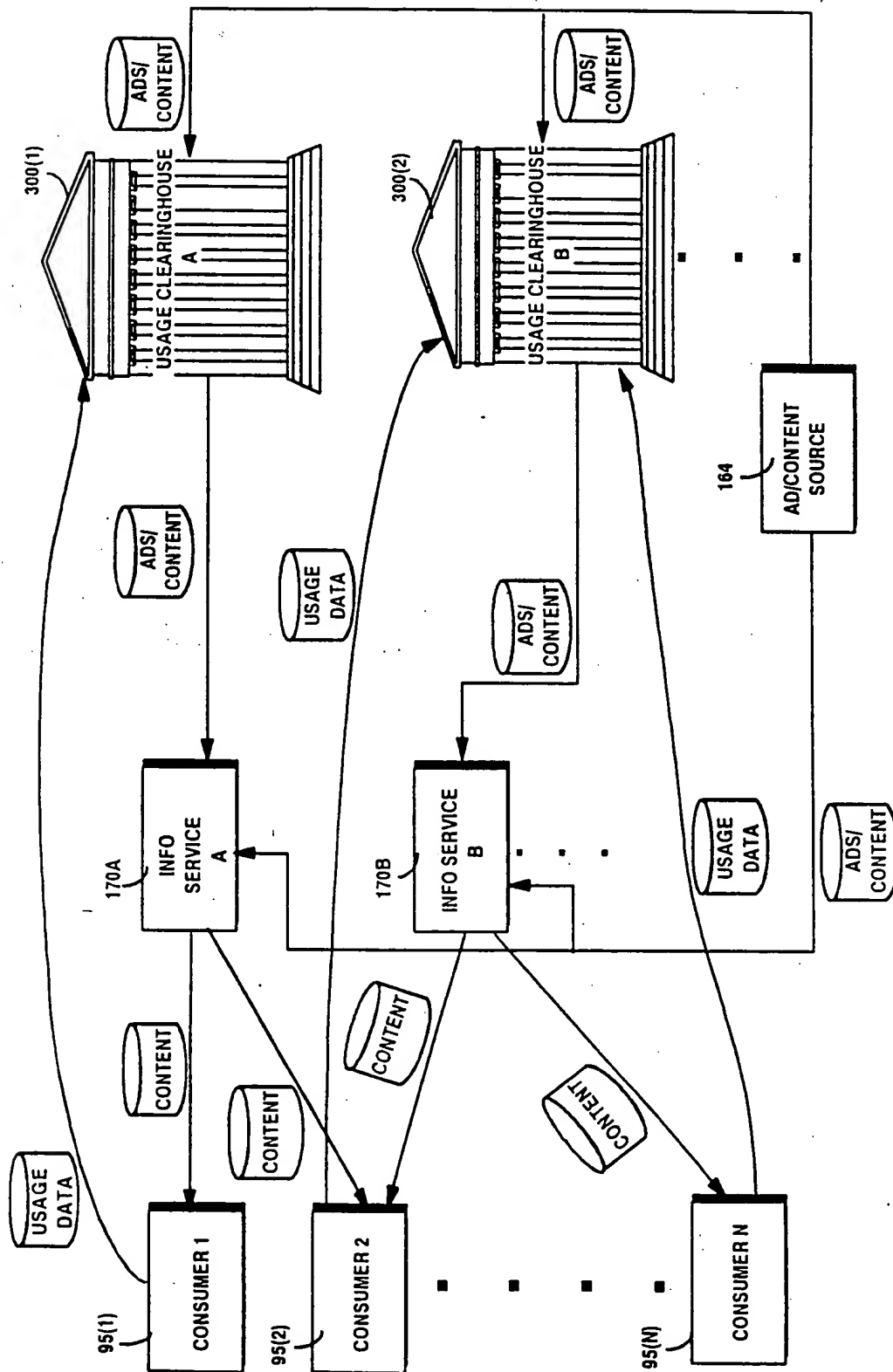
**FIG. 36** Example Usage Clearing Process



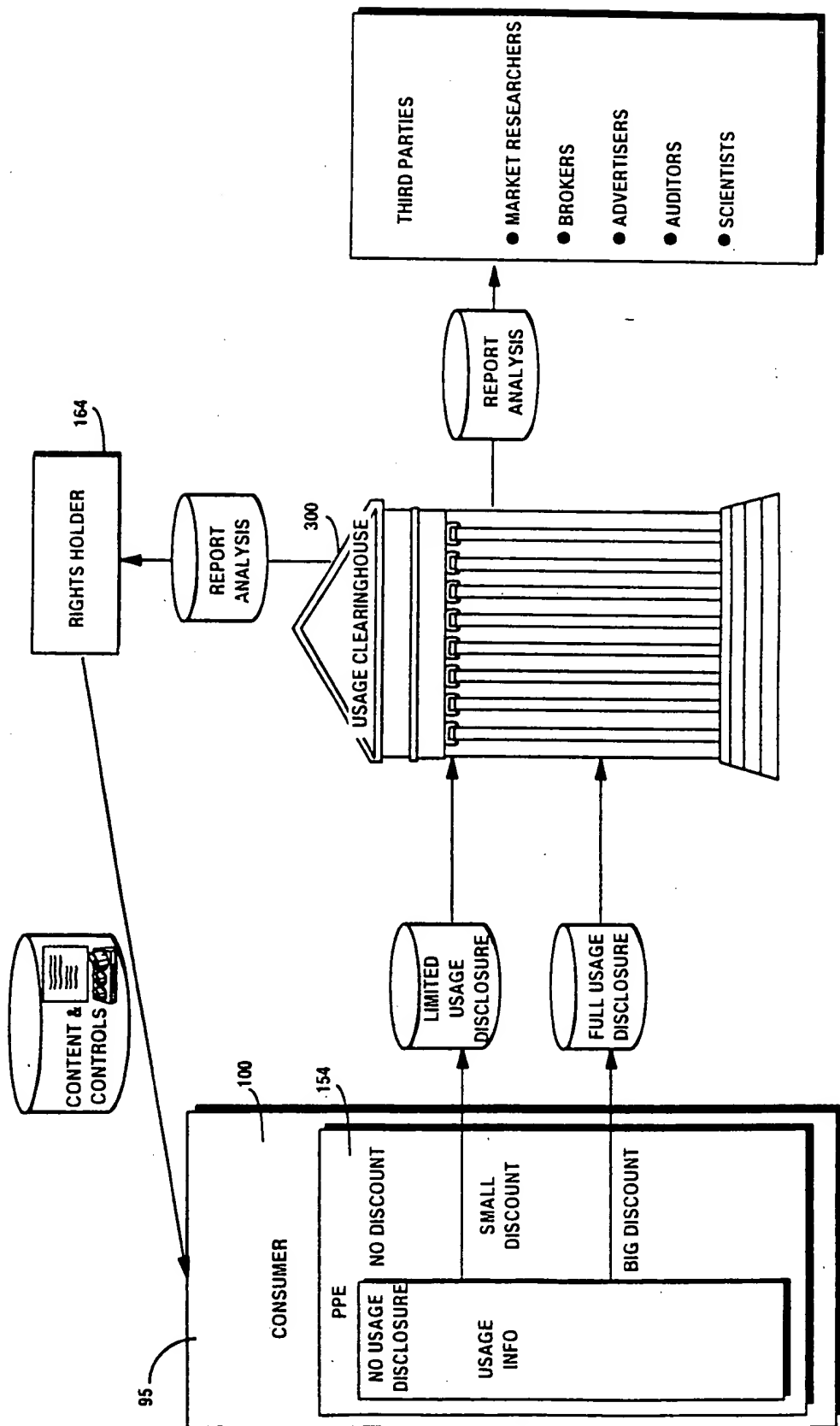
**FIG. 37** Example Financial & Usage Clearinghouse Process



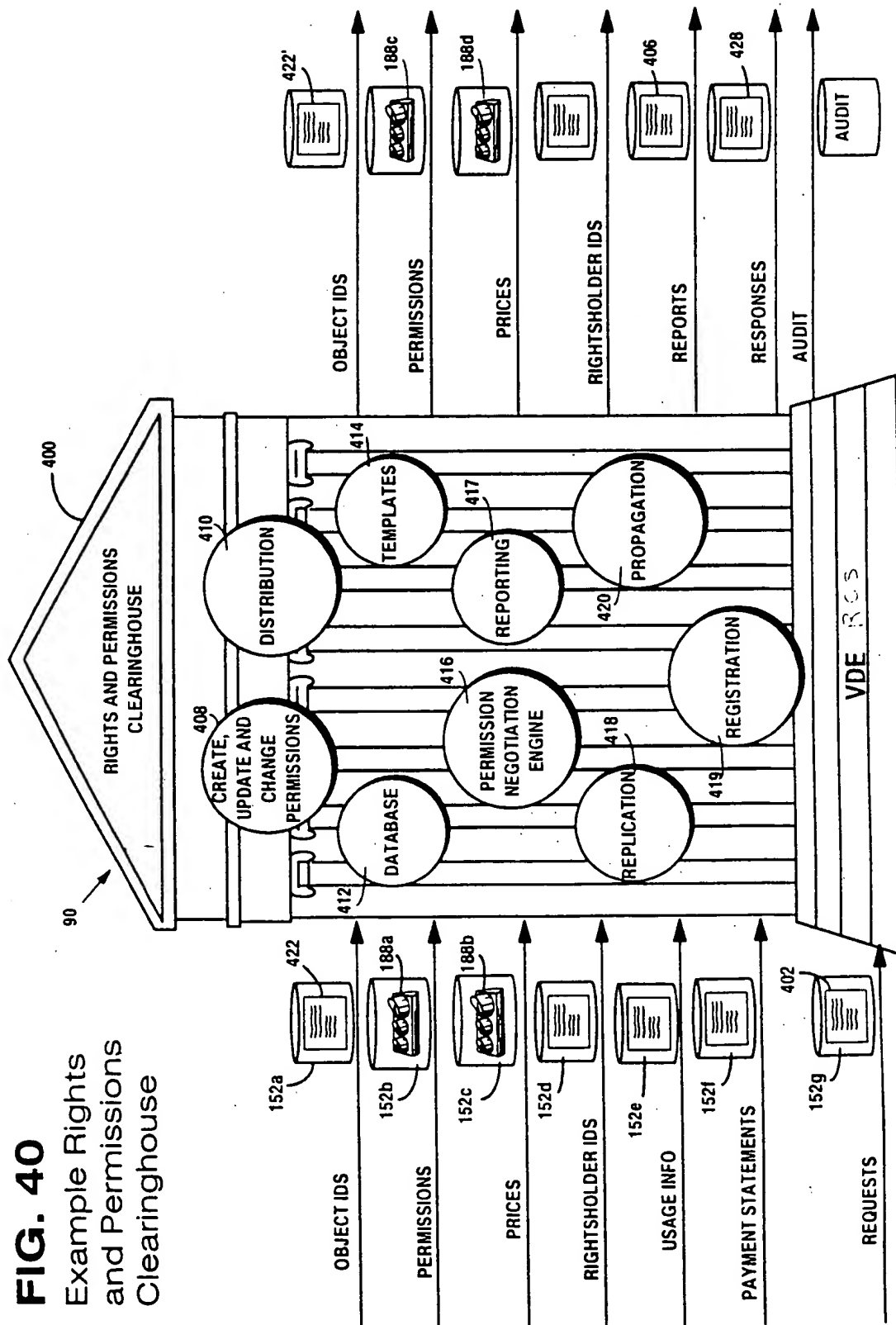
**FIG. 38** EXAMPLE USAGE CLEARINGHOUSE MEDIA PLACEMENT



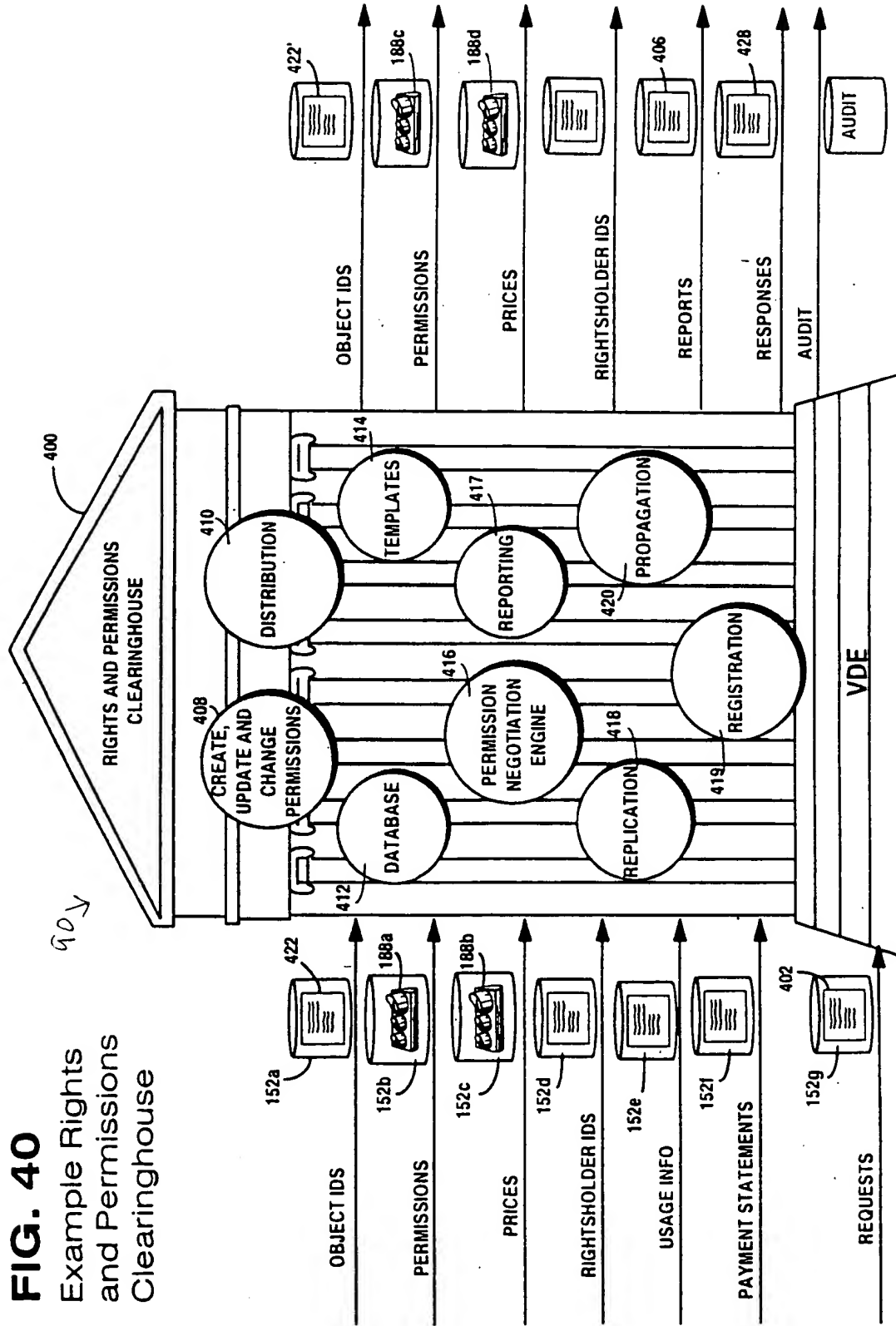
**FIG. 39**  
 EXAMPLE USAGE CLEARINGHOUSE  
 DISCOUNTS BASED ON DISCLOSURE



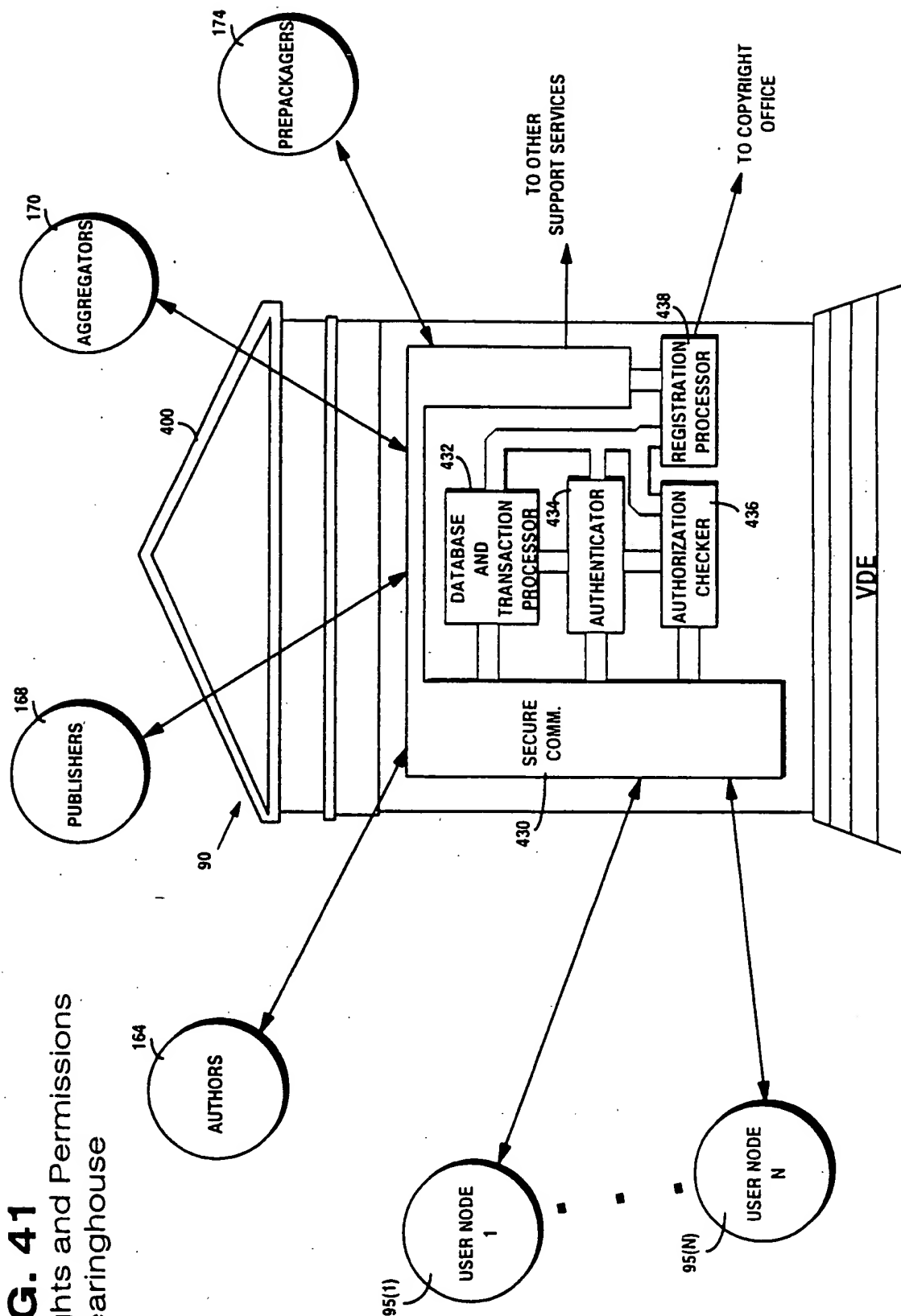
**FIG. 40**  
Example Rights and Permissions  
and Permissions  
Clearinghouse



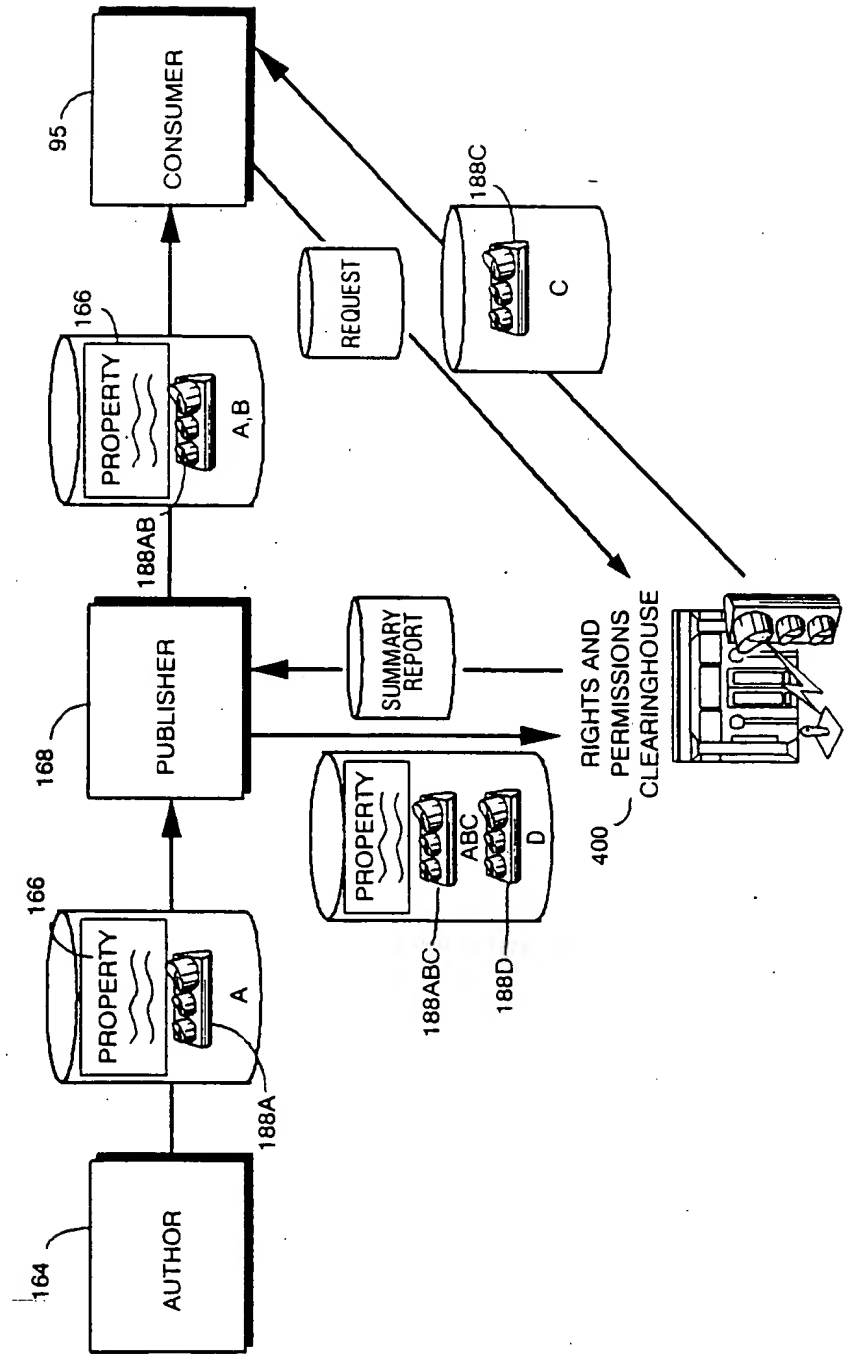
**FIG. 40**  
Example Rights  
and Permissions  
Clearinghouse



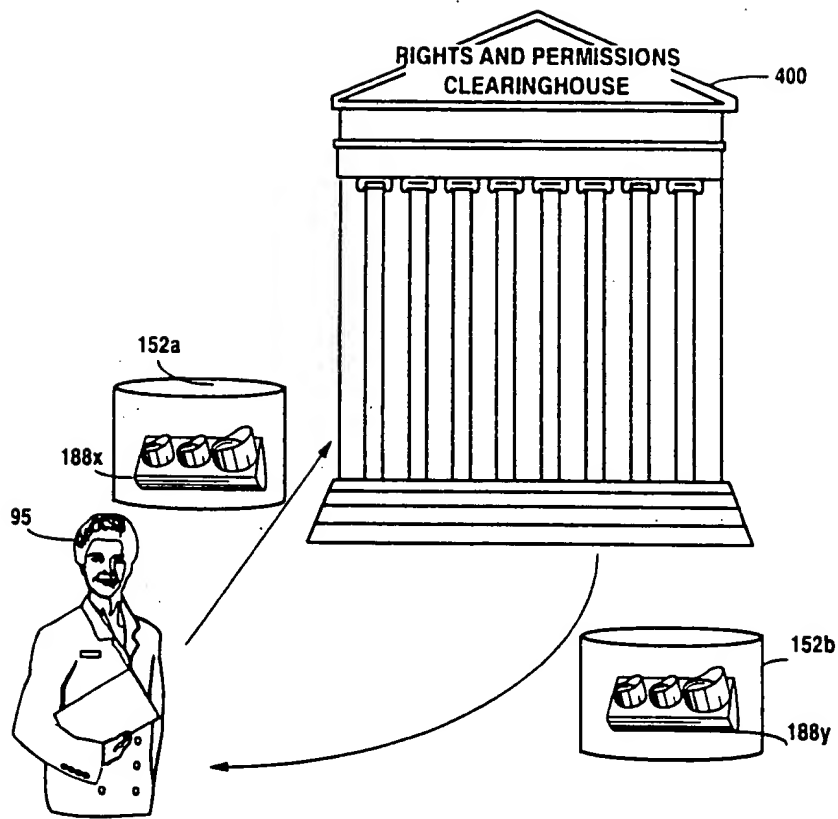
**FIG. 41**  
Rights and Permissions  
Clearinghouse



**FIG. 42** Example Rights & Permissions Clearinghouse Process



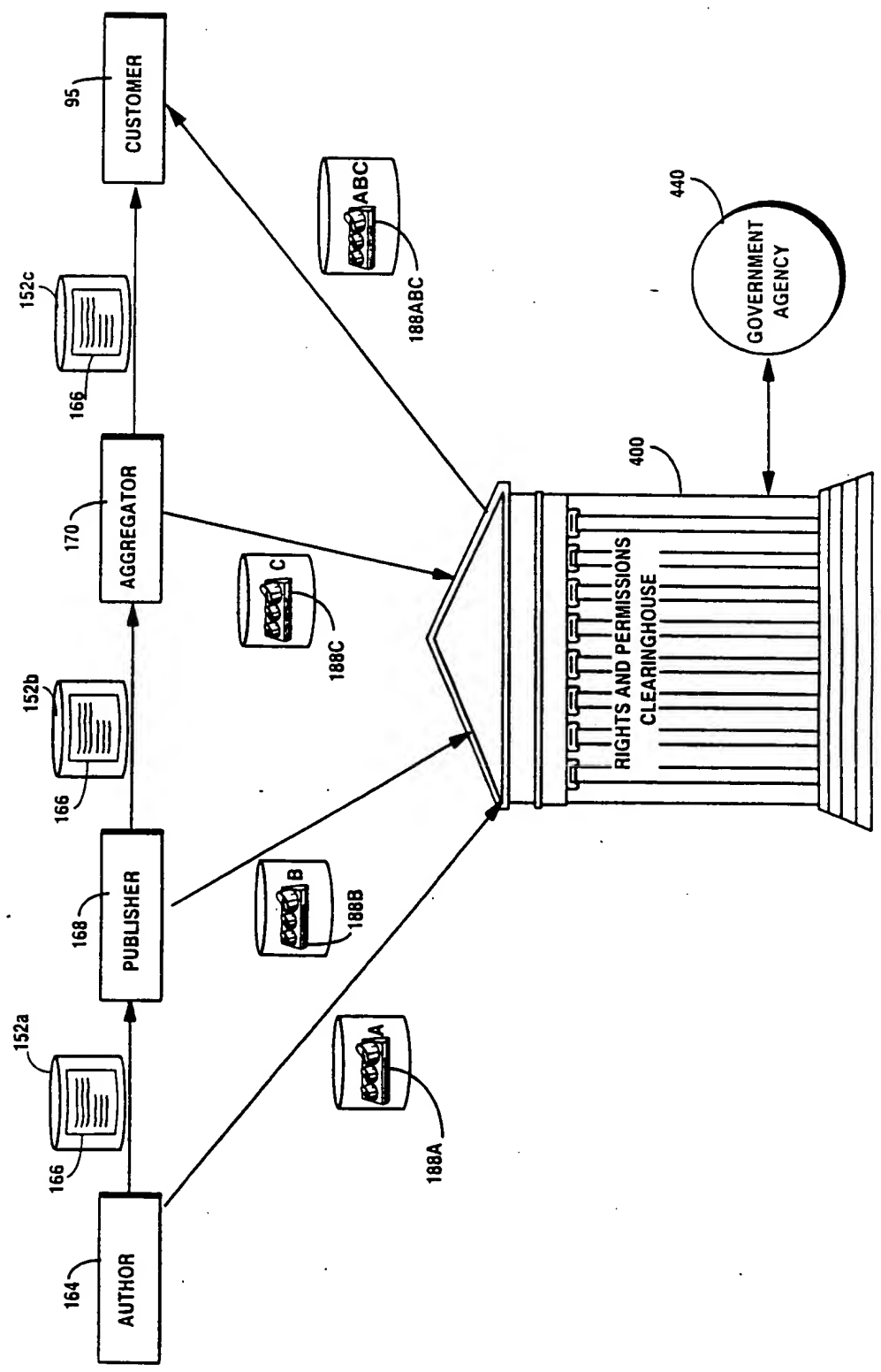


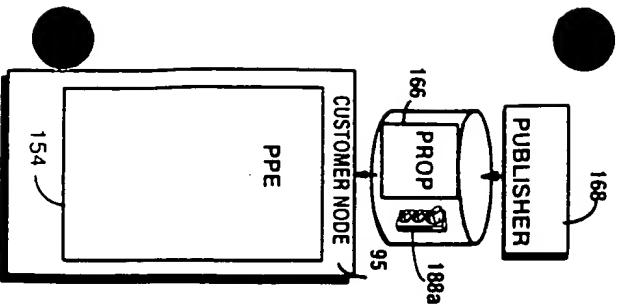


**FIG. 42A**

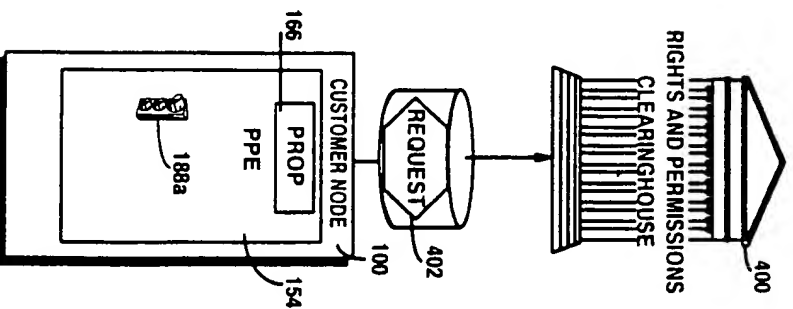
Consumer Registers Control Set  
To Request Updates

**FIG. 43** EXAMPLE RIGHTS AND PERMISSIONS VALUE CHAIN

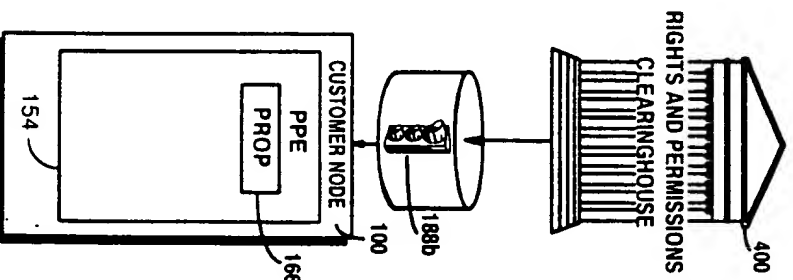




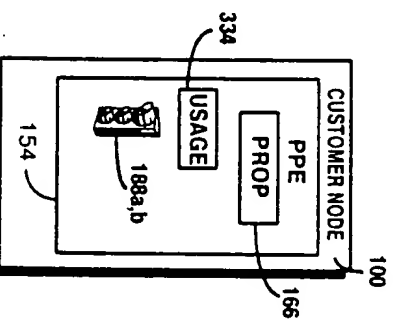
**FIG. 44A**  
Customer  
Receives  
Property



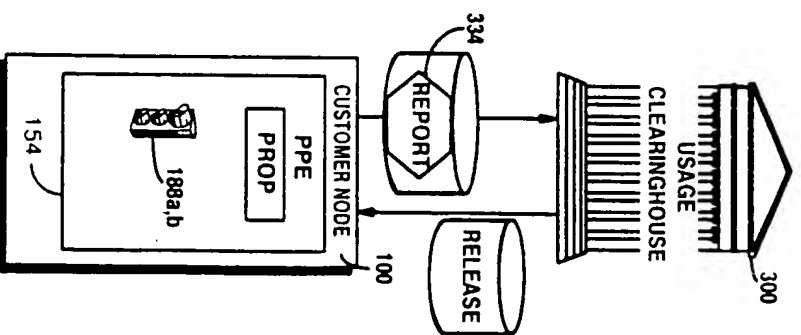
**FIG. 44B**  
Customer  
Requests Rights  
To Use Property



**FIG. 44C**  
Rights and  
Permissions  
Clearinghouse  
Provides Rights  
To Customer



**FIG. 44D**  
Customer  
Uses Property  
In Accordance  
With Rights

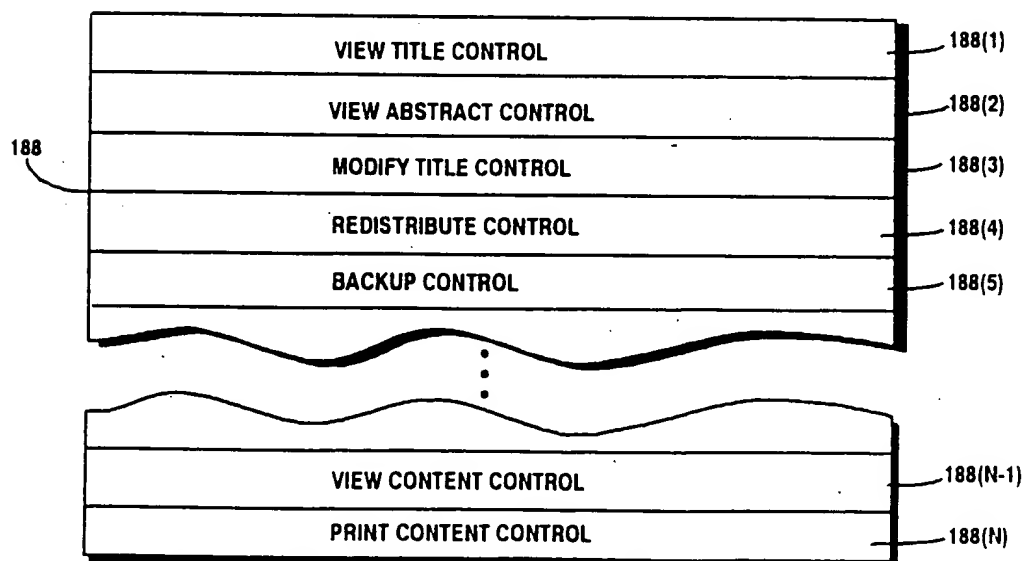


**FIG. 44E**  
Customer  
Node Reports  
Aspects Of  
Usage

450

ACTION	PERMISSION TYPE				PRICING MODELS			
	UNCOND. PERMIT	COND. ON CONTENT PAYMENT	UNCOND. BASED	PROHIBIT				
VIEW TITLE	✓							
VIEW ABSTRACT	✓							
MODIFY TITLE				✓	. . . .			
REDIS-TRIBUTE			✓					
BACK UP		✓			ONE TIME PURCH.	PAY PER ACTION	DECL. COST	...
VIEW CONTENT		✓			ONE TIME PURCH.	PAY PER VIEW	DECL. COST	...
PRINT CONTENT		✓			ONE TIME PURCH.	PAY PER PRINT	DECL. COST	...

**FIG. 45A** EXAMPLE RIGHTS TEMPLATE

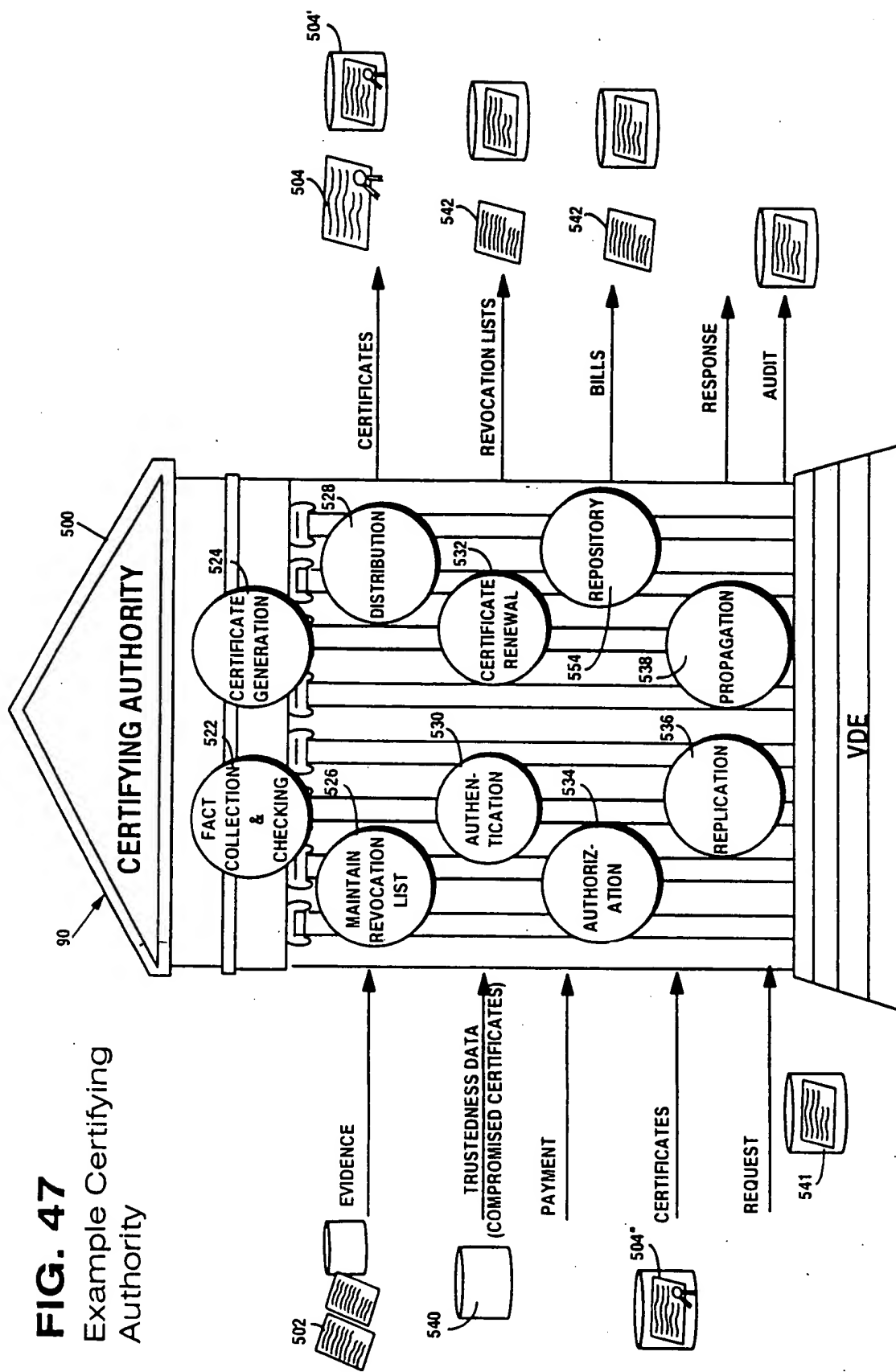


**FIG. 45C** EXAMPLE CONTROL SET

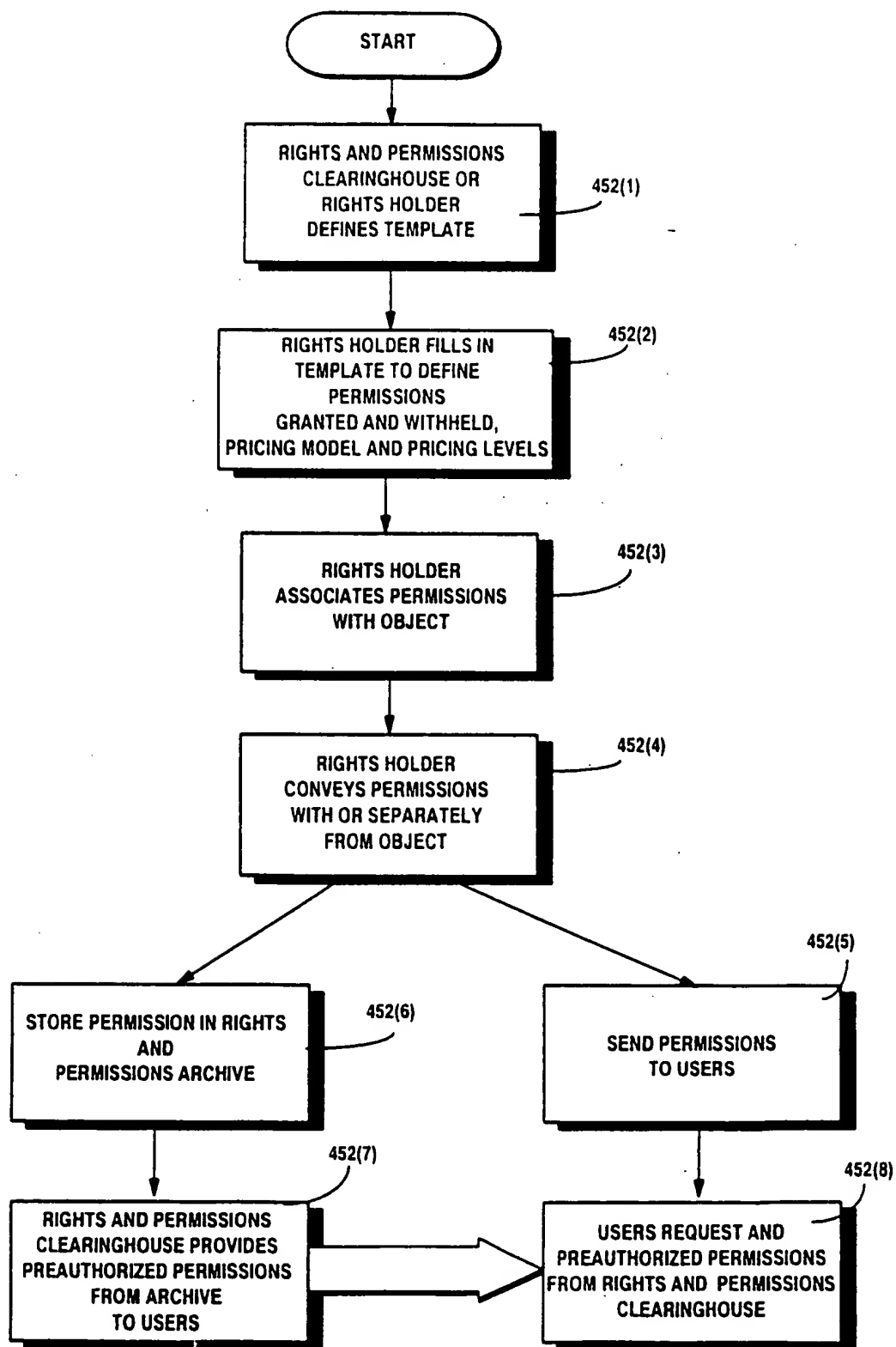
VIEW CONTENT	ONE TIME PURCHASE	✓	\$ _____
	PAY PER VIEW	✓	\$ _____
	DECLINING COST		\$ _____
PRINT. CONTENT	ONE TIME PURCHASE		\$ _____
...			

**FIG. 45B** PRICING MODELS AND LEVELS

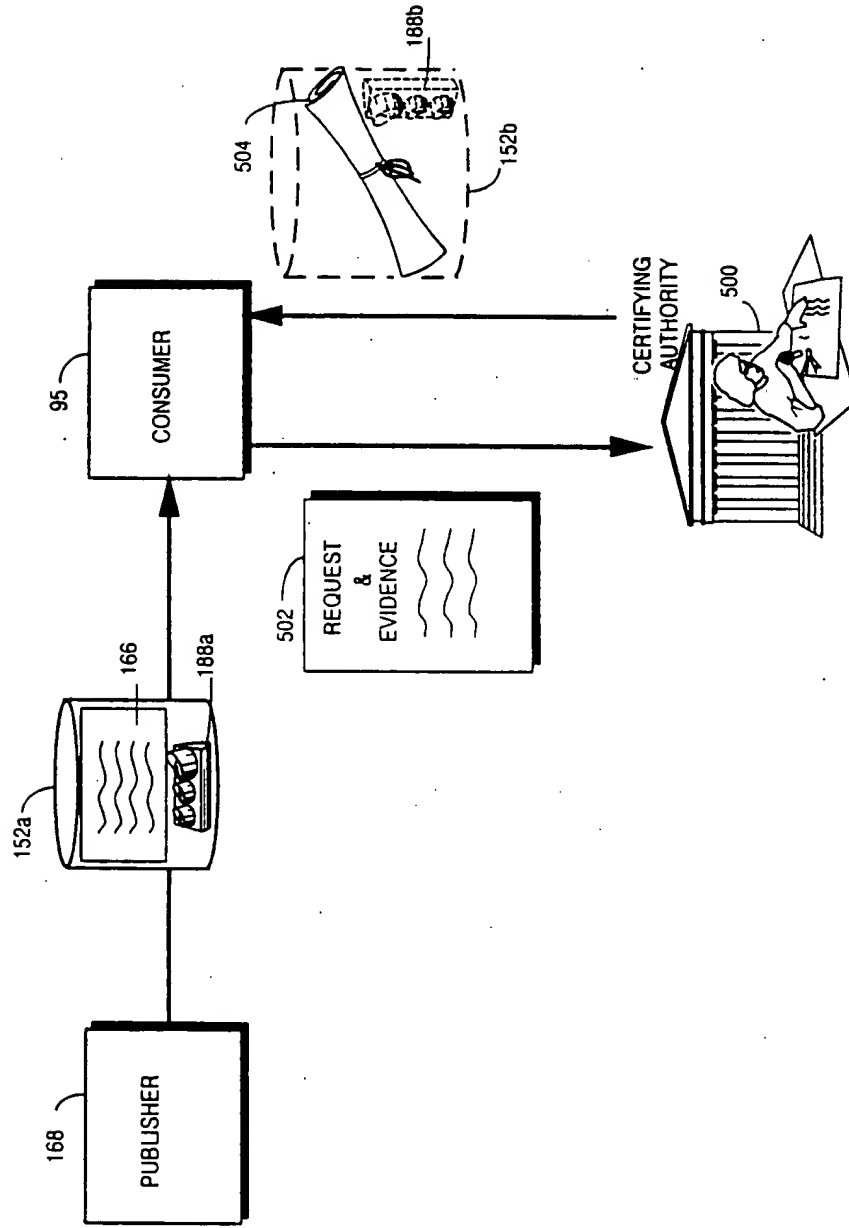
**FIG. 47**  
Example Certifying  
Authority



**FIG. 46** Example Rights And Permissions Clearing Process

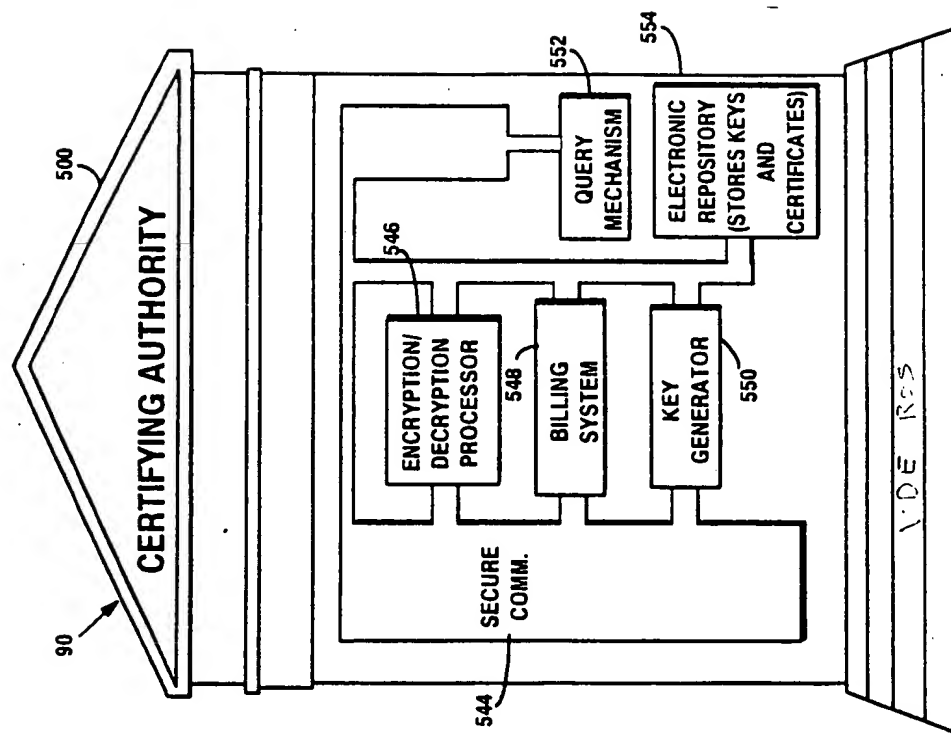


**FIG. 49** Example Certifying Process

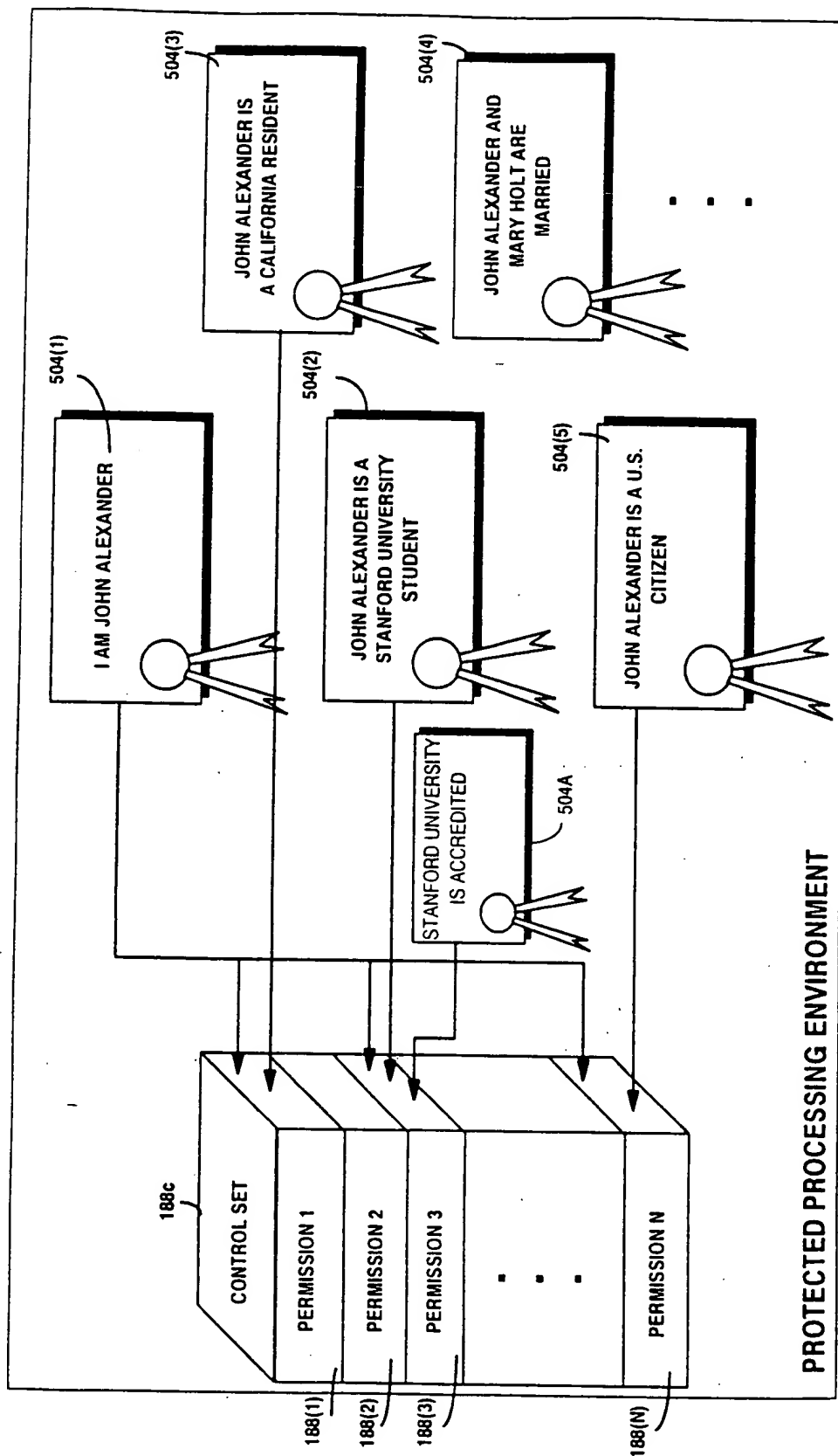


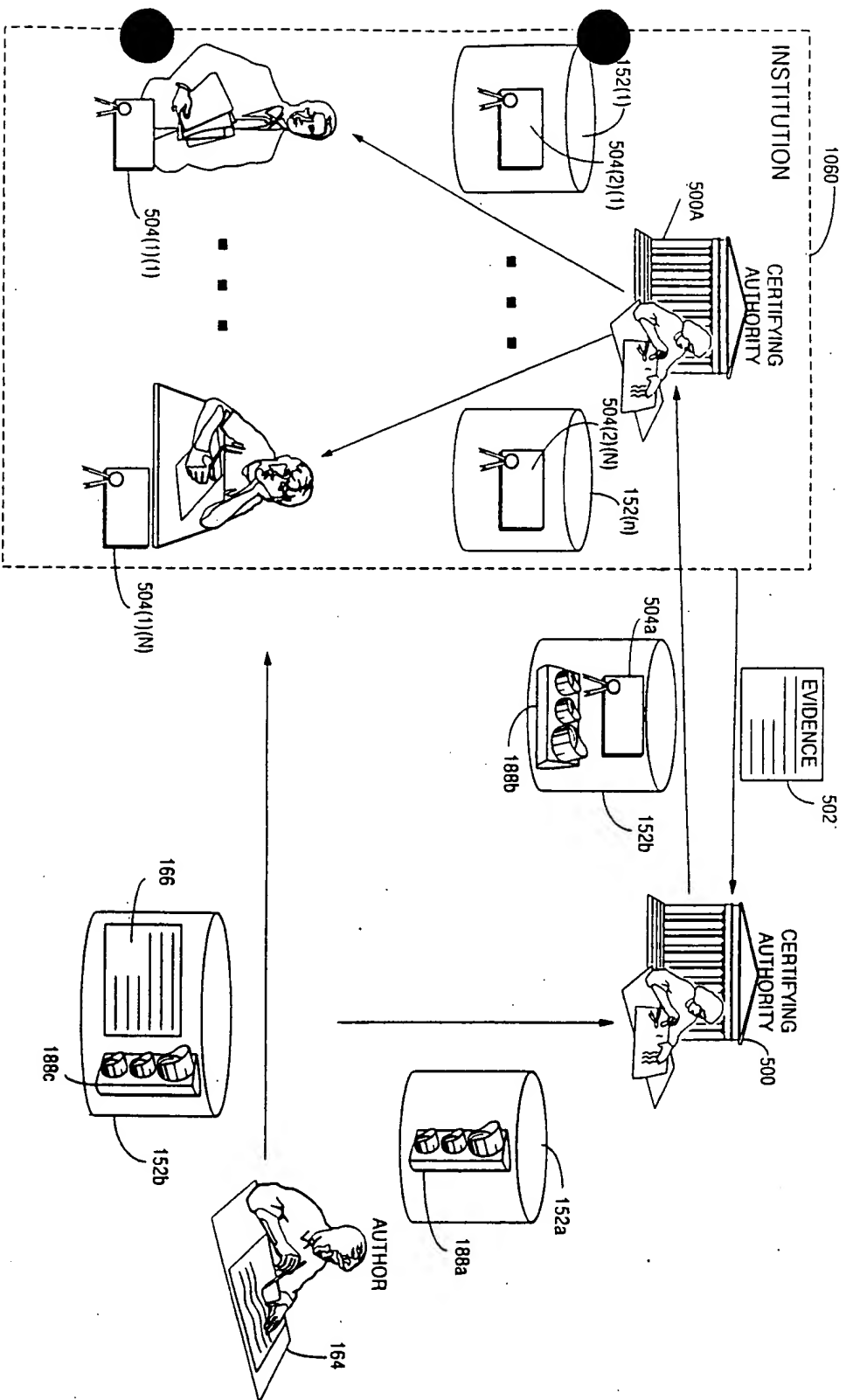


**FIG. 48**  
Example Certifying  
Authority



**FIG. 50A** Example Control Set Using Certificates





**FIG. 50** Distributed Certificate Issuance

**FIG. 51E** Generating Certificates Based On Other Certificates

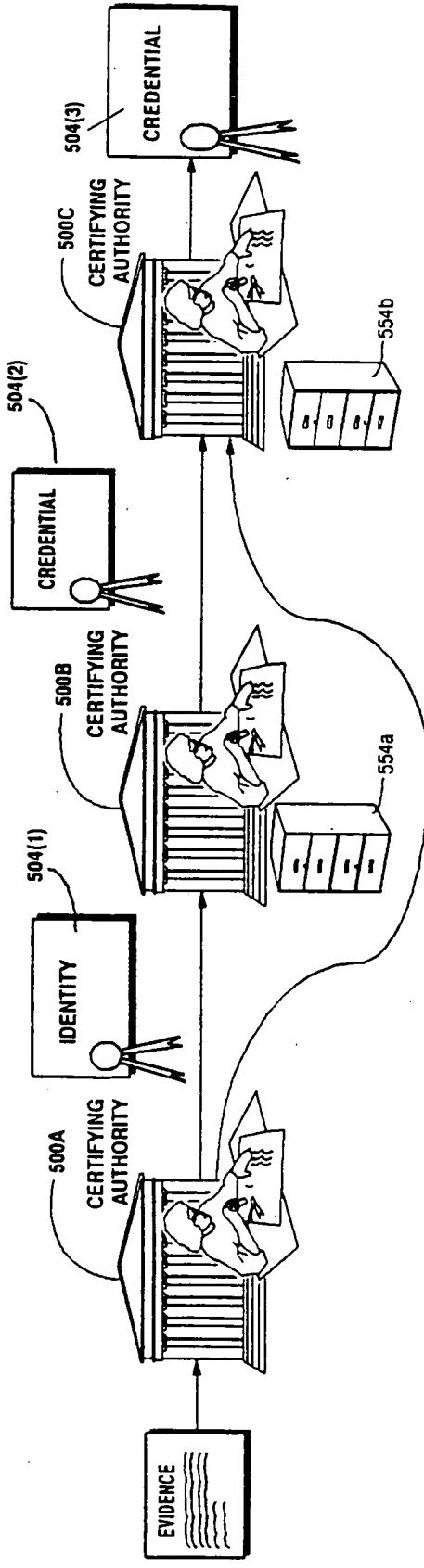


FIG. 51A

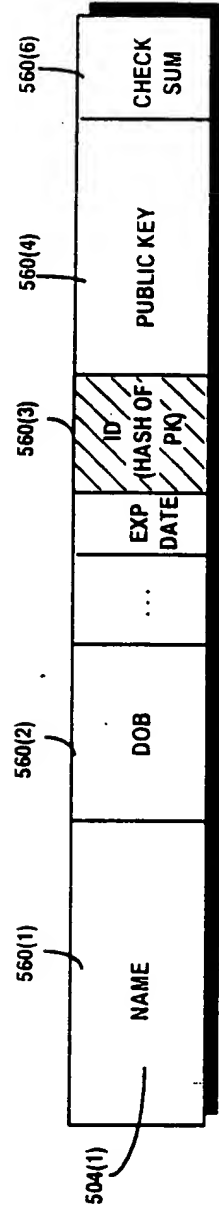


FIG. 51A

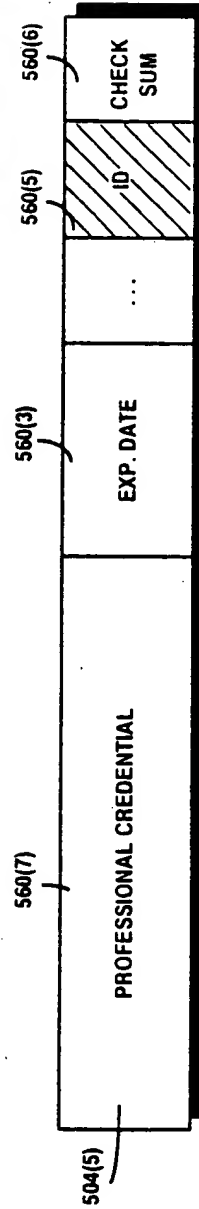


FIG. 51B

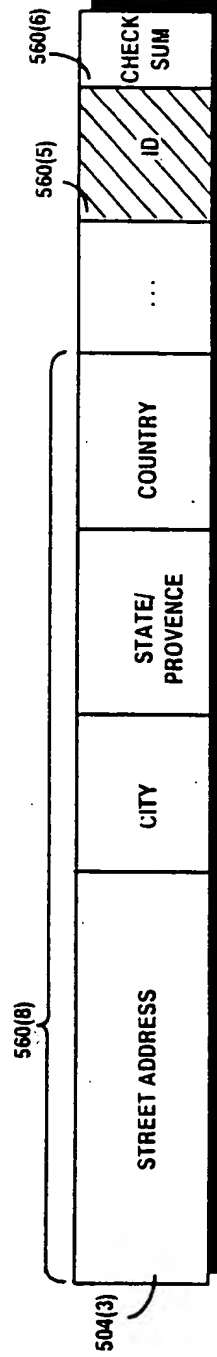


FIG. 51C

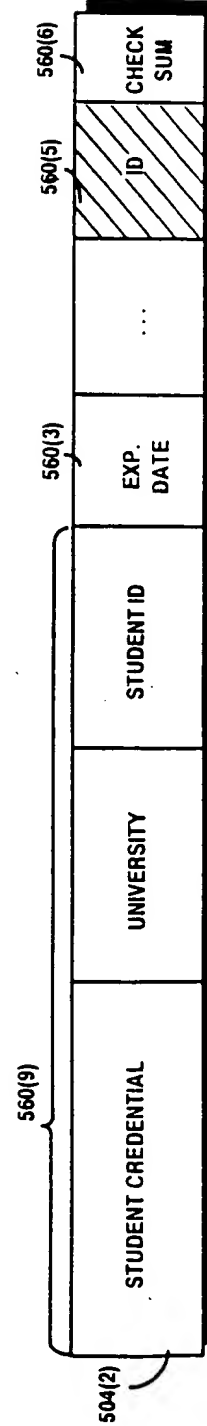


FIG. 51D

Example Digital Certificates

FIG. 51G

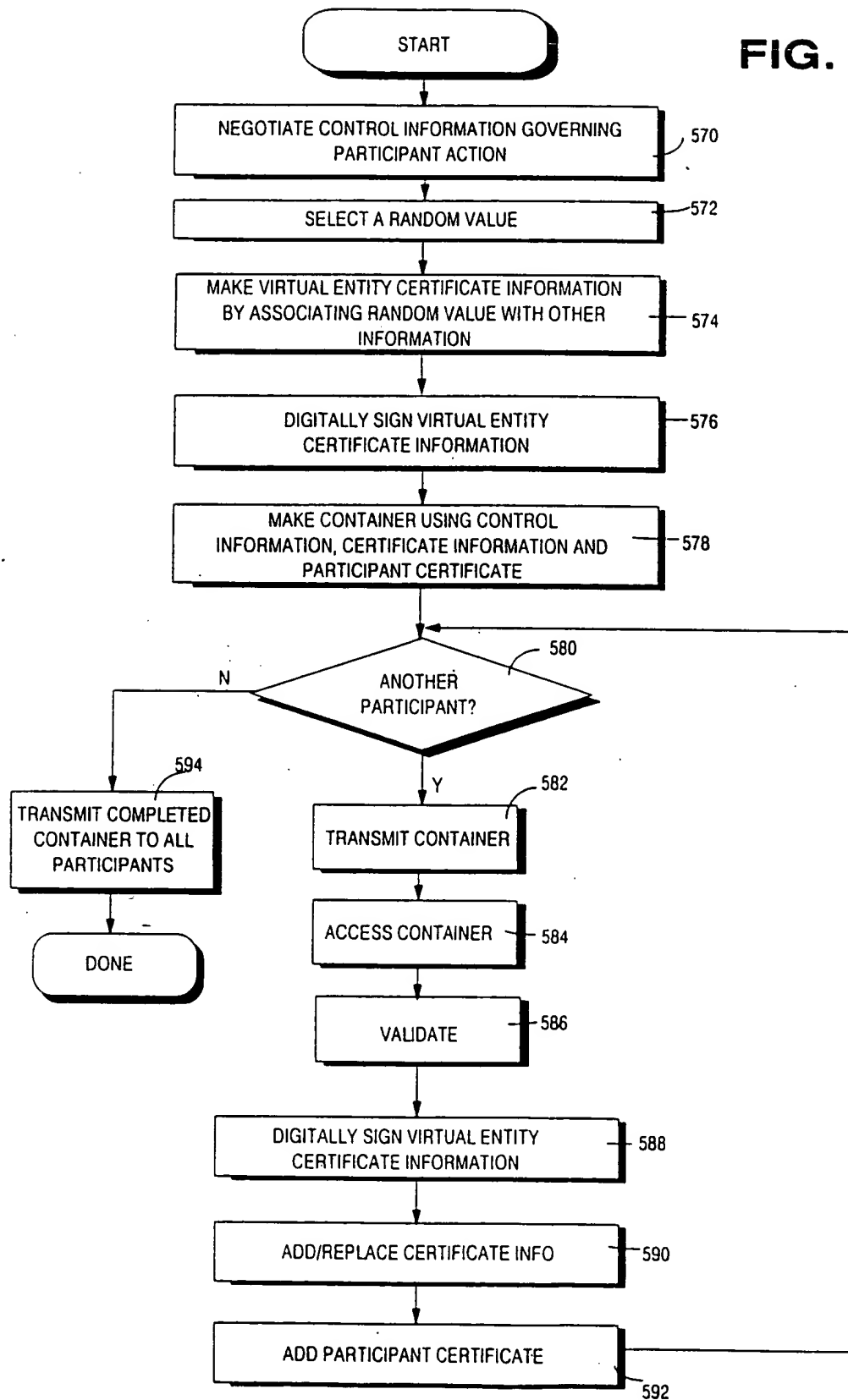
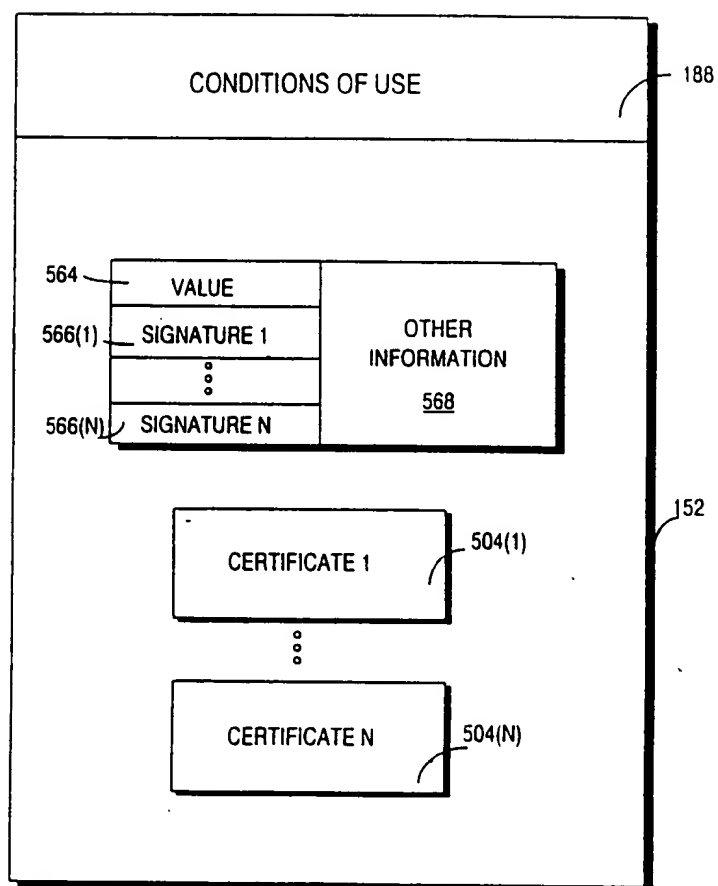
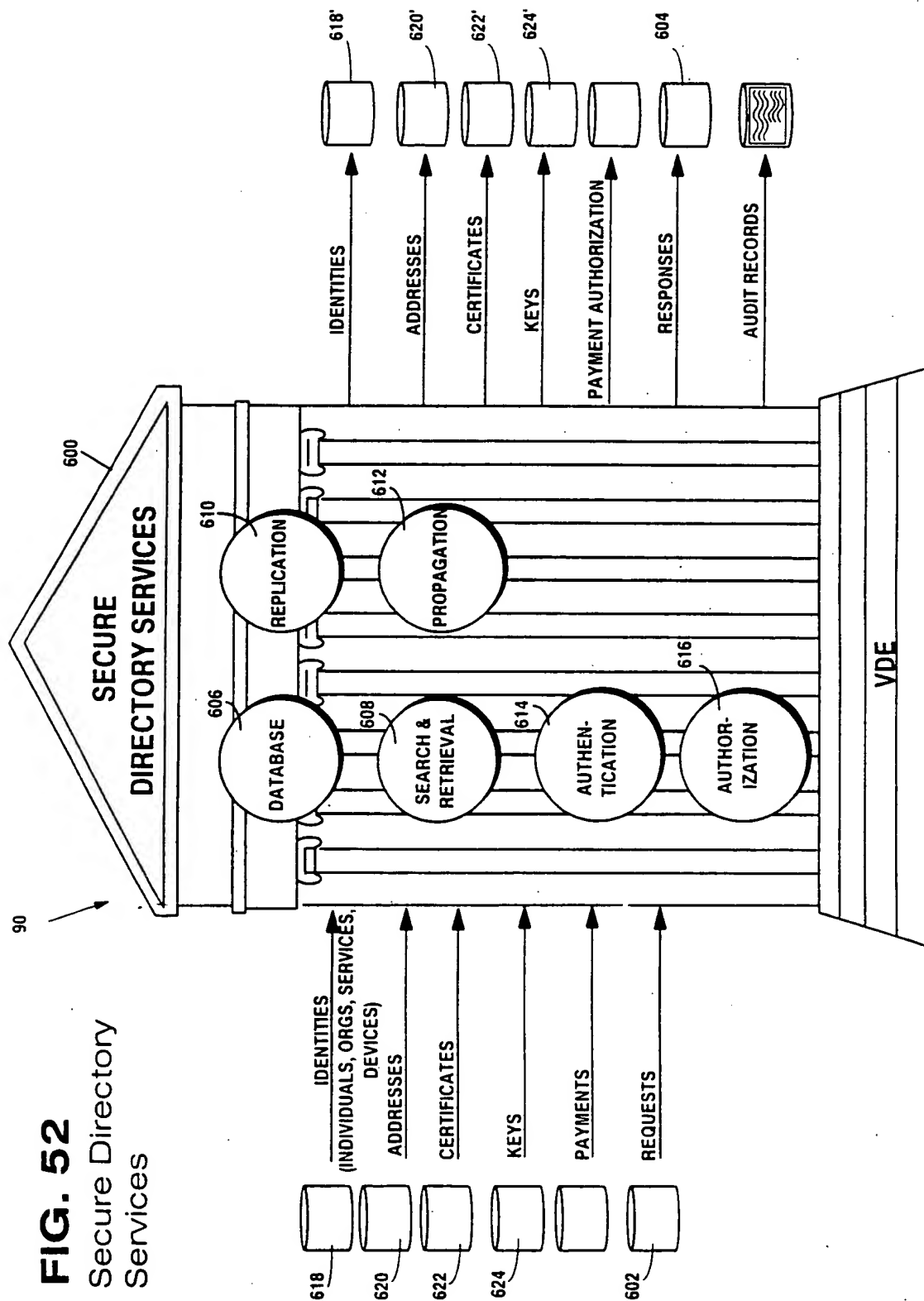


FIG. 51F

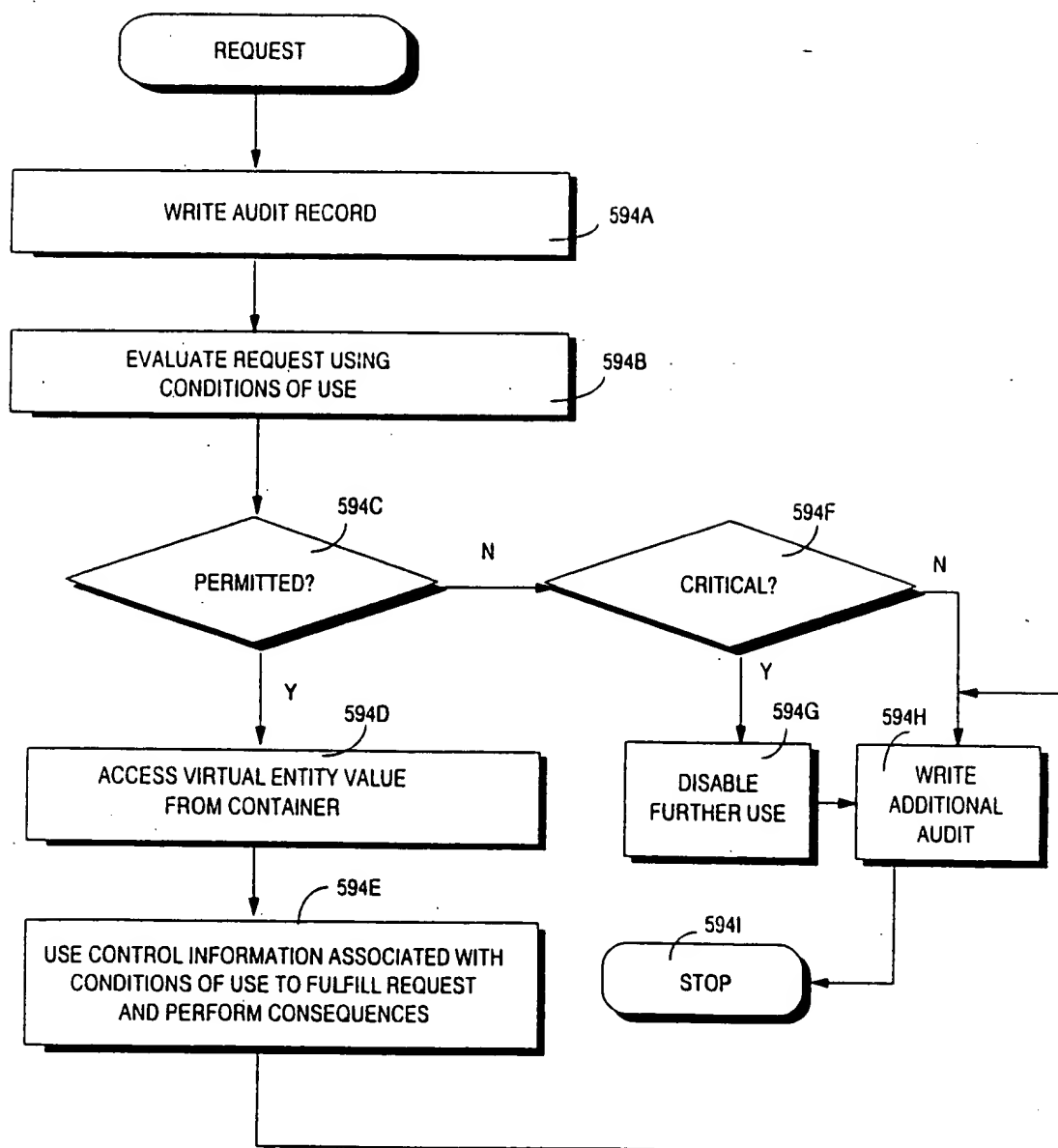


**FIG. 52**  
Secure Directory  
Services

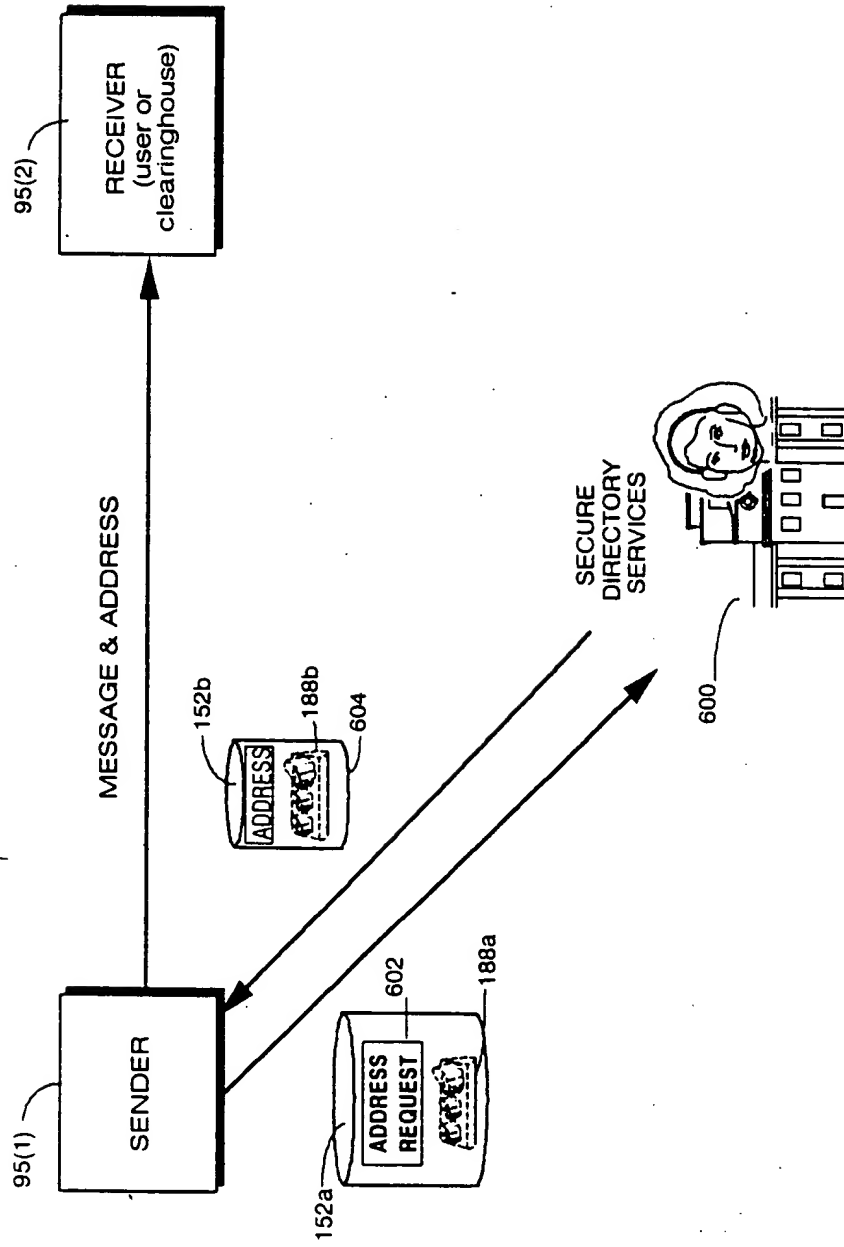




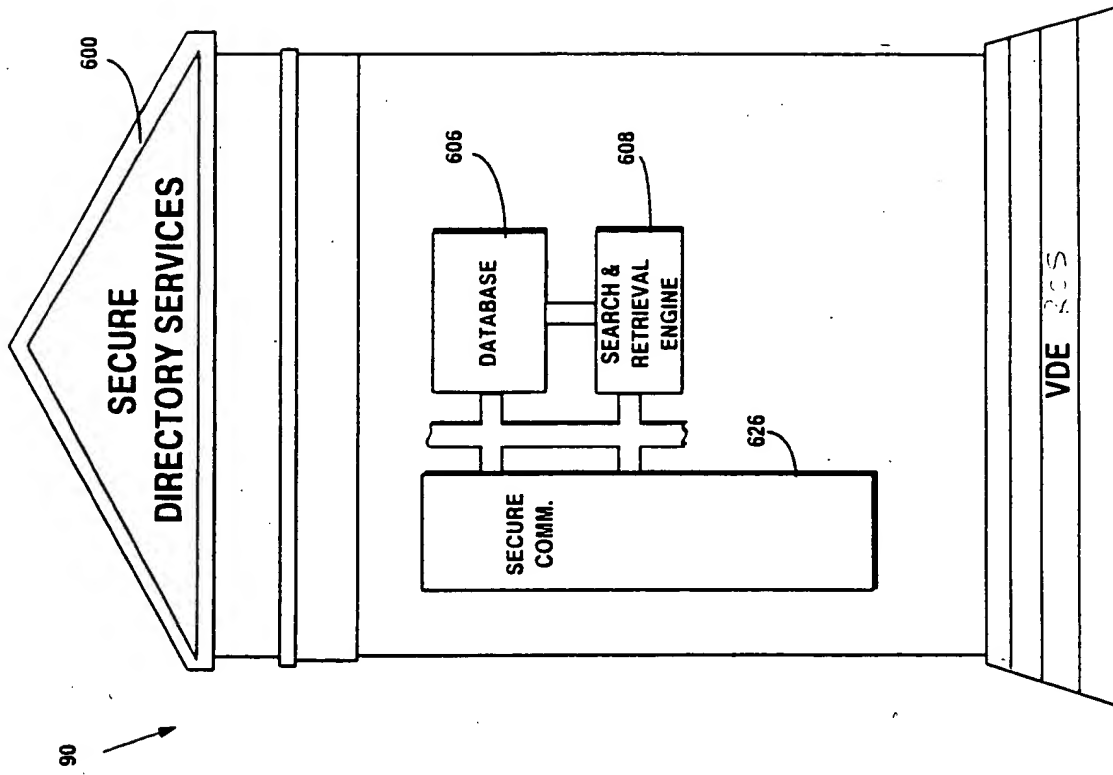
**FIG. 51H**



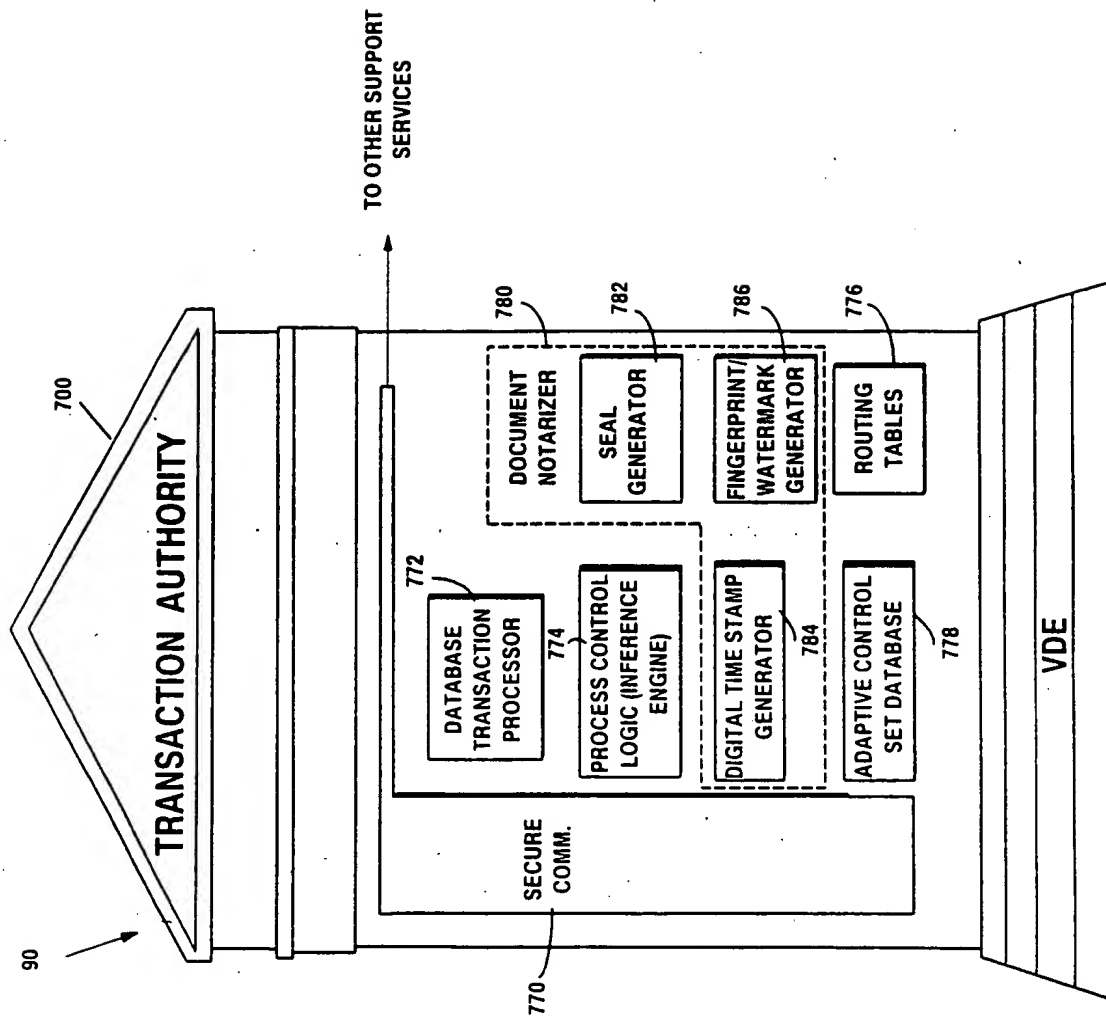
**FIG. 54** Example Secure Directory Service Process



**FIG. 53**  
Example Secure  
Directory Services

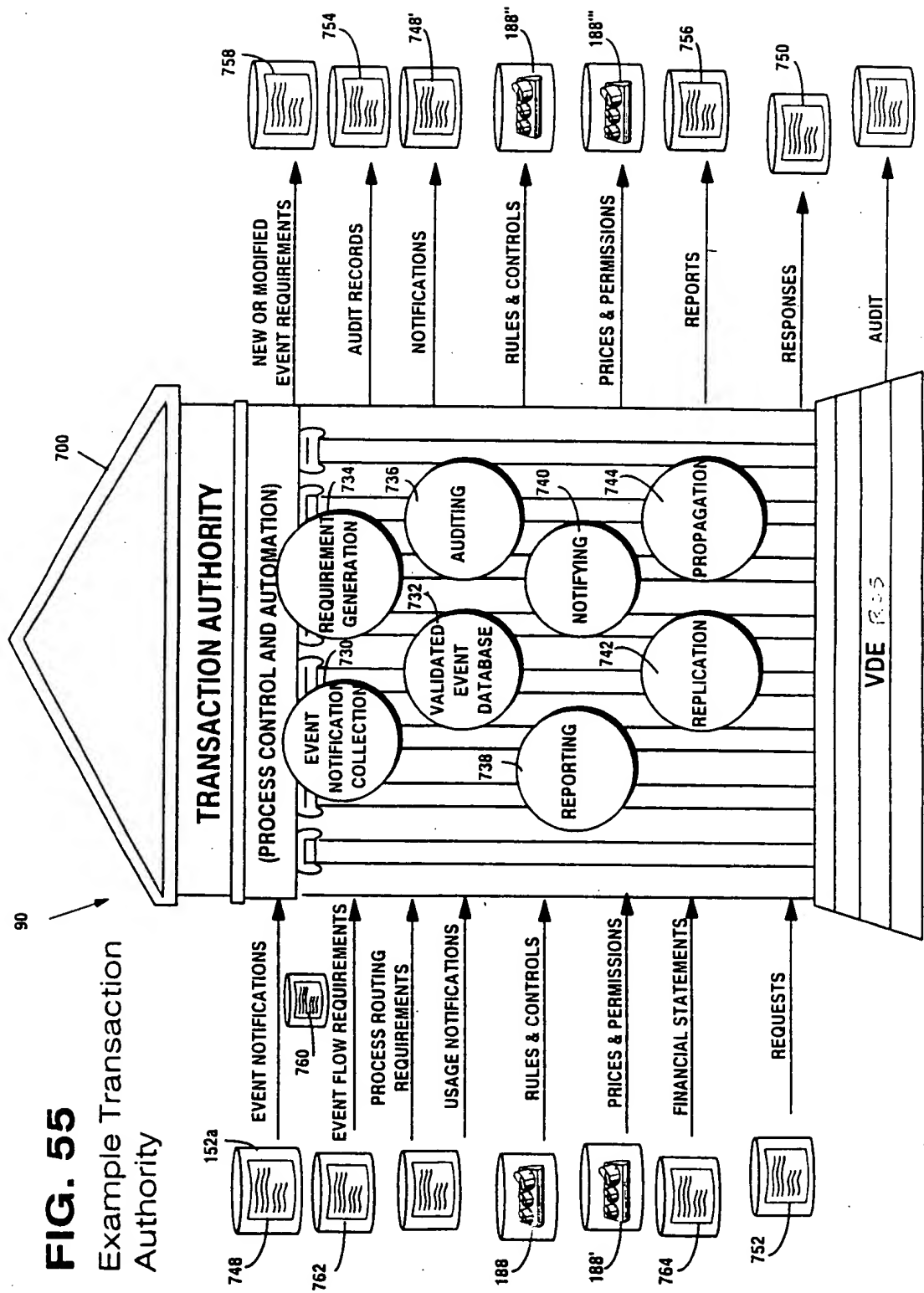


**FIG. 56**  
Example Transaction  
Authority



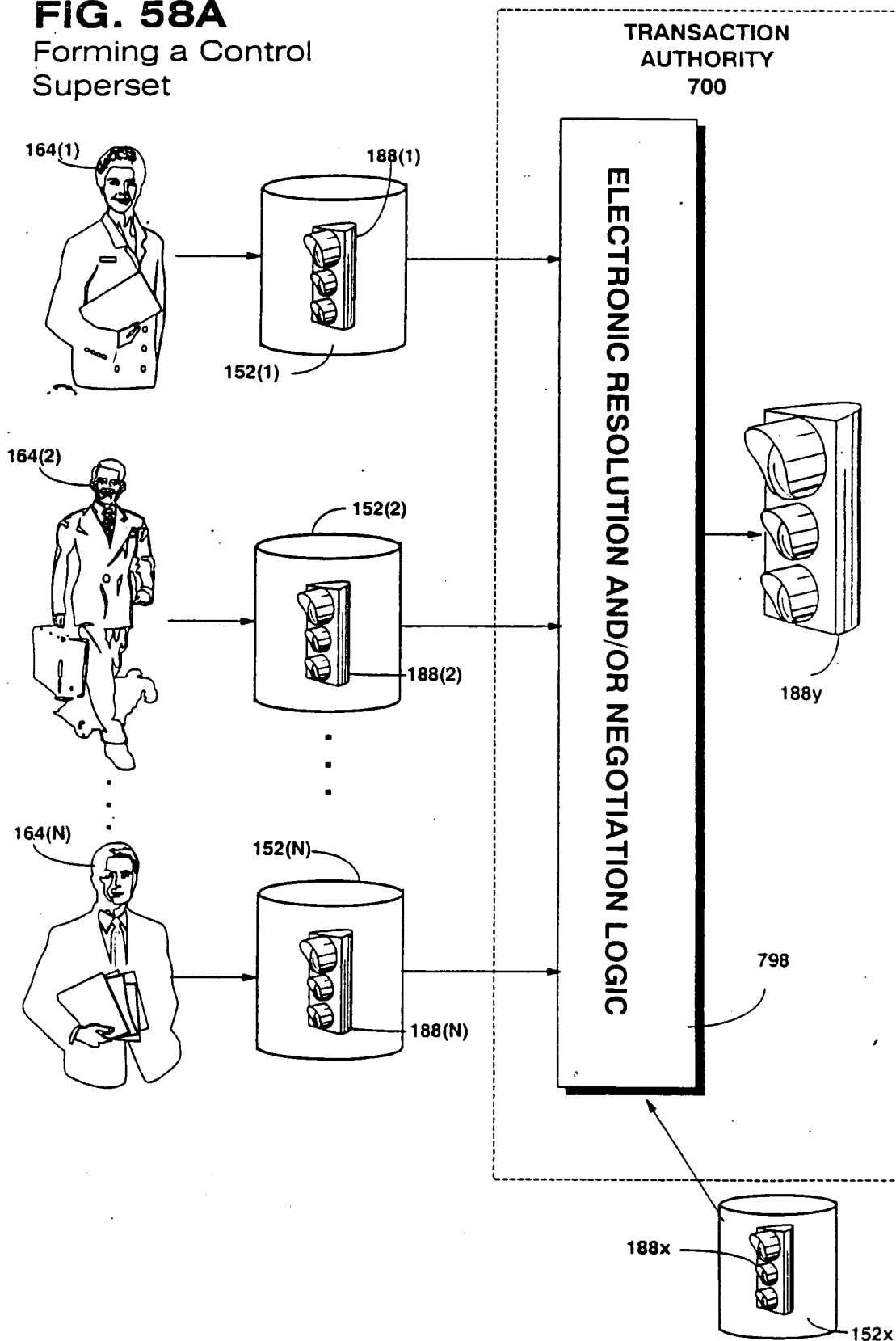
**FIG. 55**

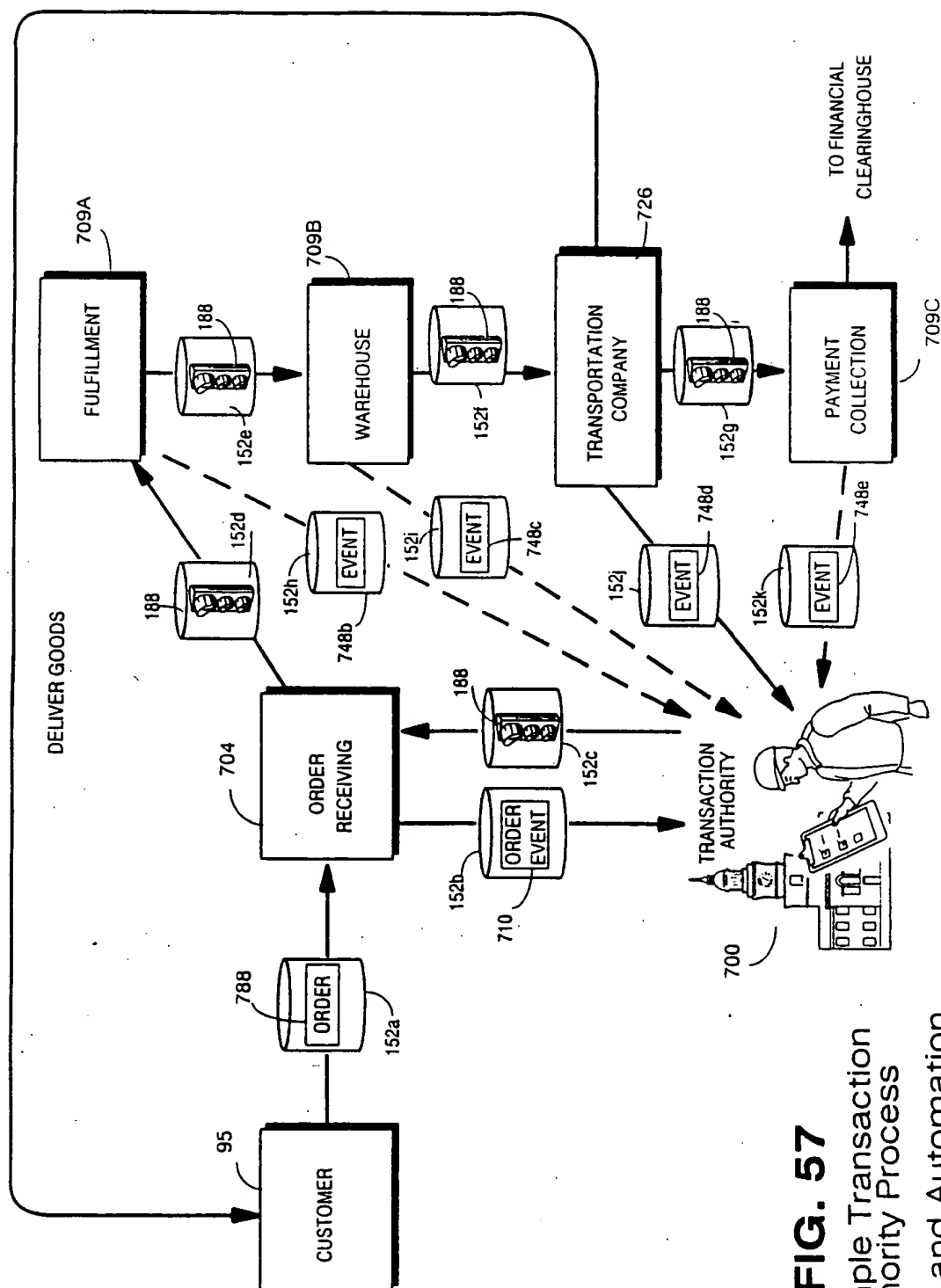
Example Transaction Authority



**FIG. 58A**

Forming a Control  
Superset





**FIG. 57**  
Example Transaction  
Authority Process  
Control and Automation

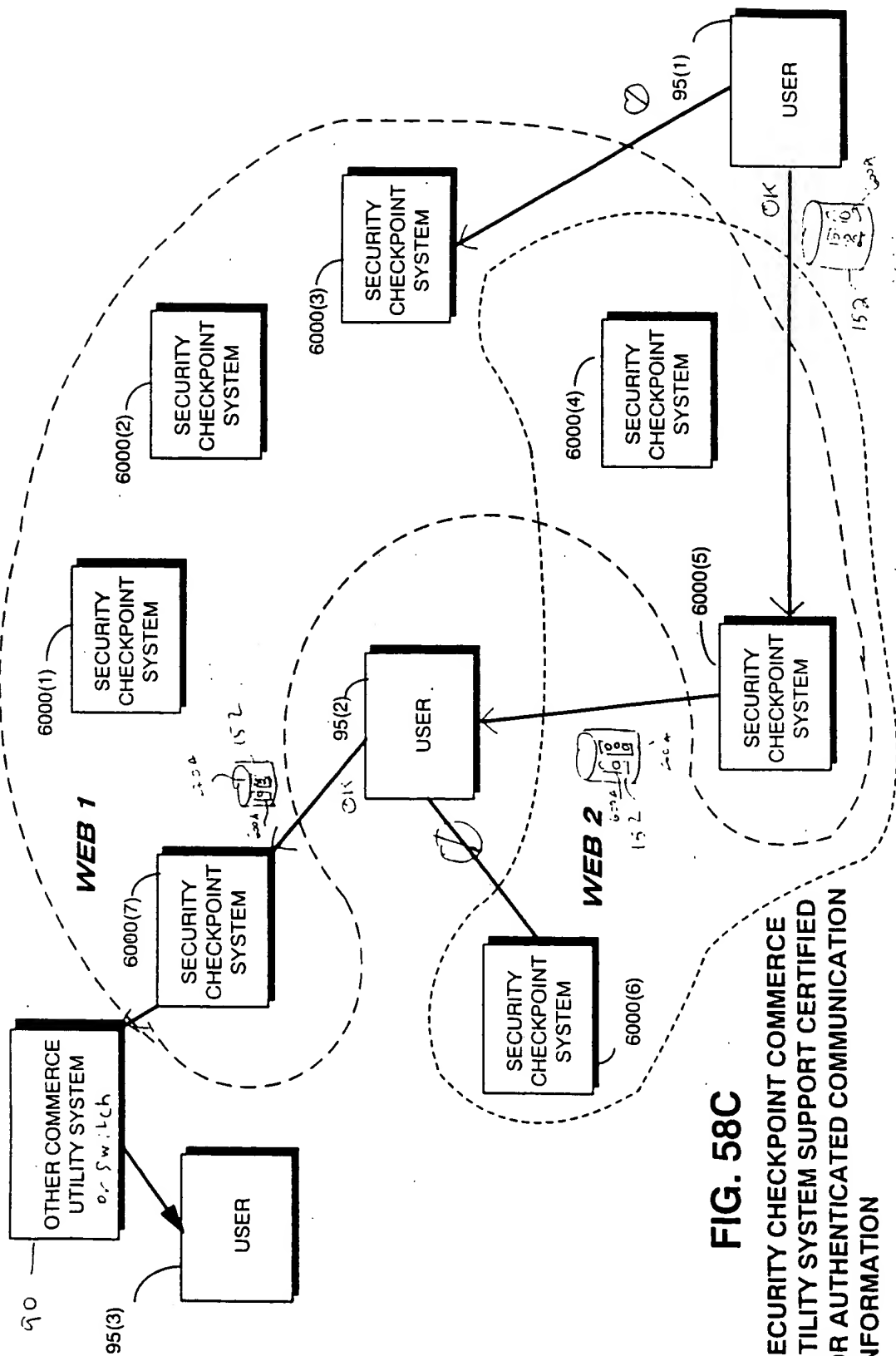


FIG. 58C

SECURITY CHECKPOINT COMMERCE  
UTILITY SYSTEM SUPPORT CERTIFIED  
OR AUTHENTICATED COMMUNICATION  
INFORMATION



**FIG. 58B** Transaction Authority Example Steps

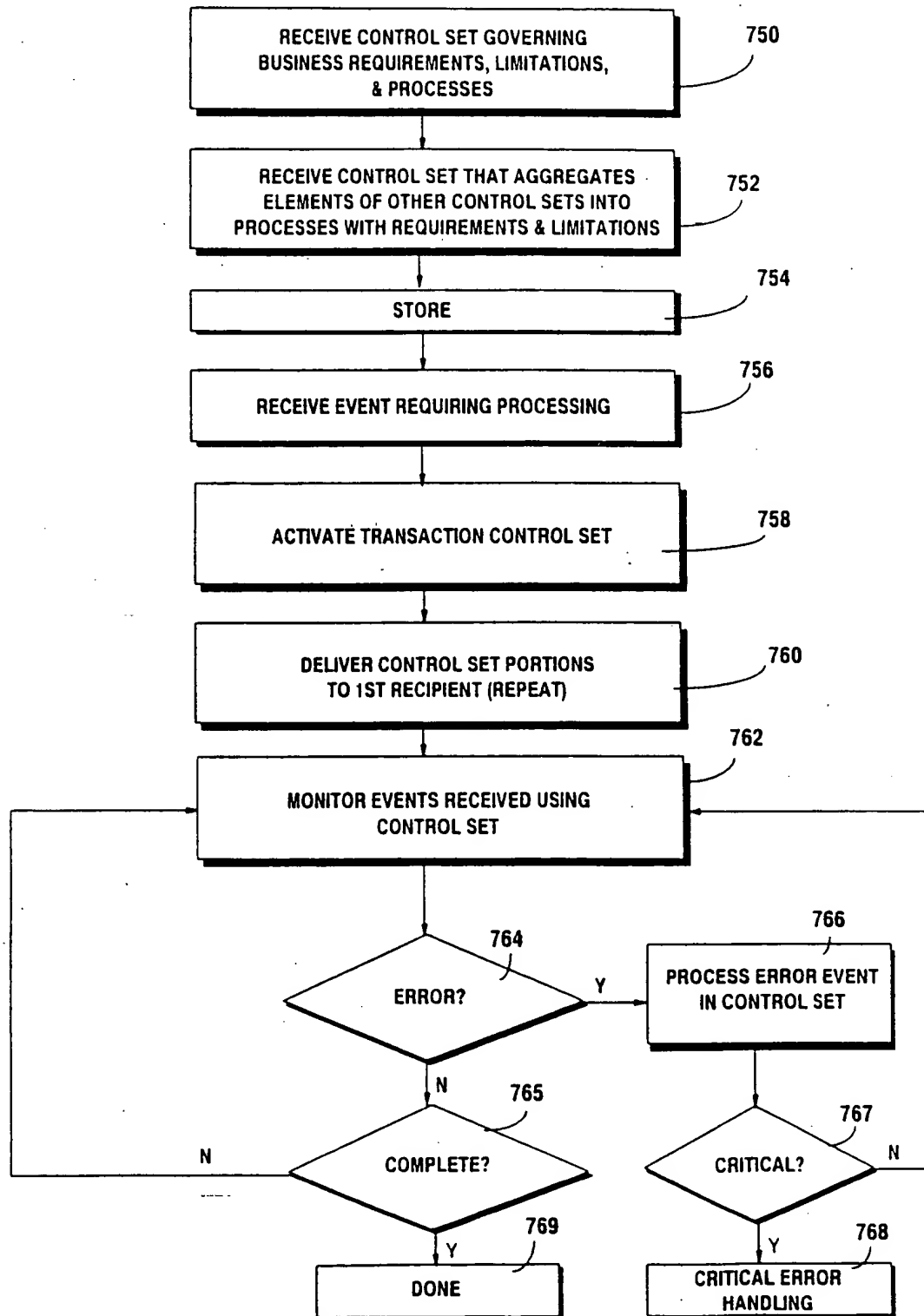
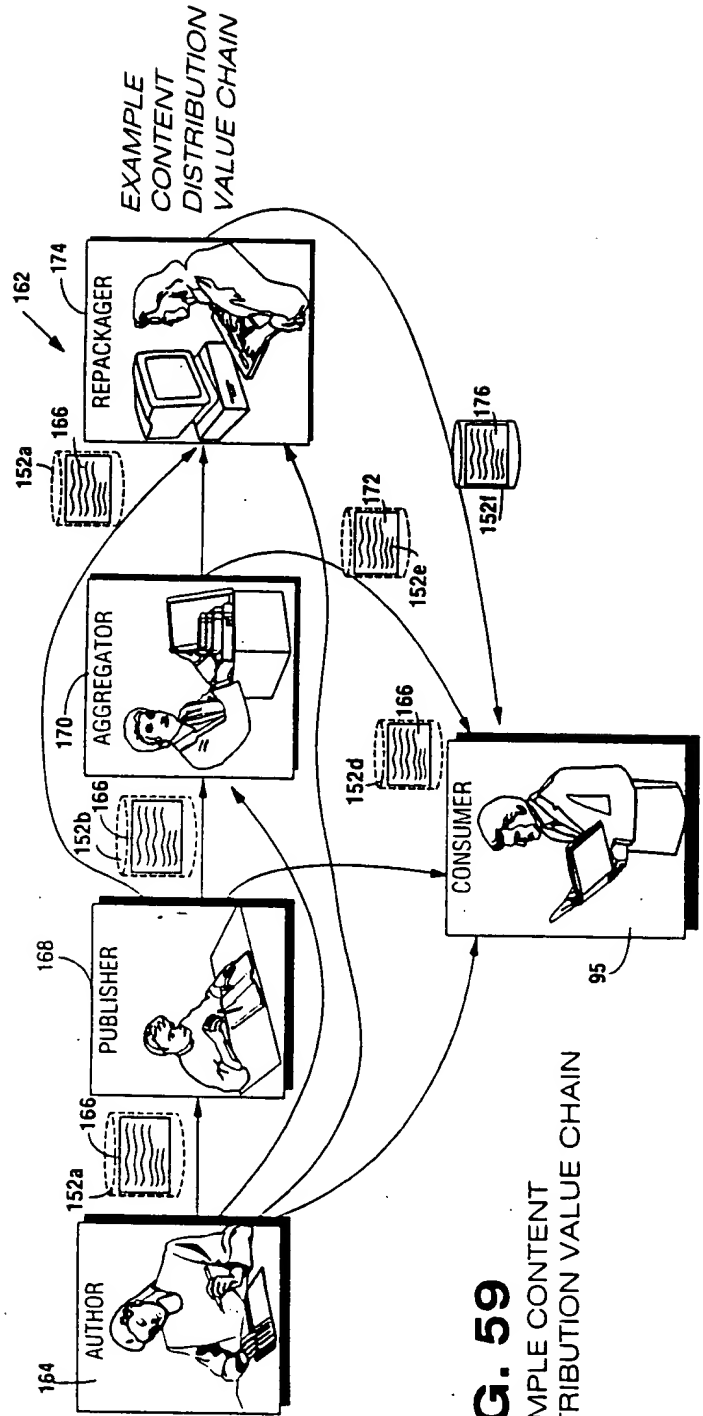


FIG. 59 is a block diagram of an example content distribution value chain. The diagram illustrates the flow of content from an author to a consumer, involving various intermediaries and their associated data stores.



**FIG. 59**  
EXAMPLE CONTENT  
DISTRIBUTION VALUE CHAIN

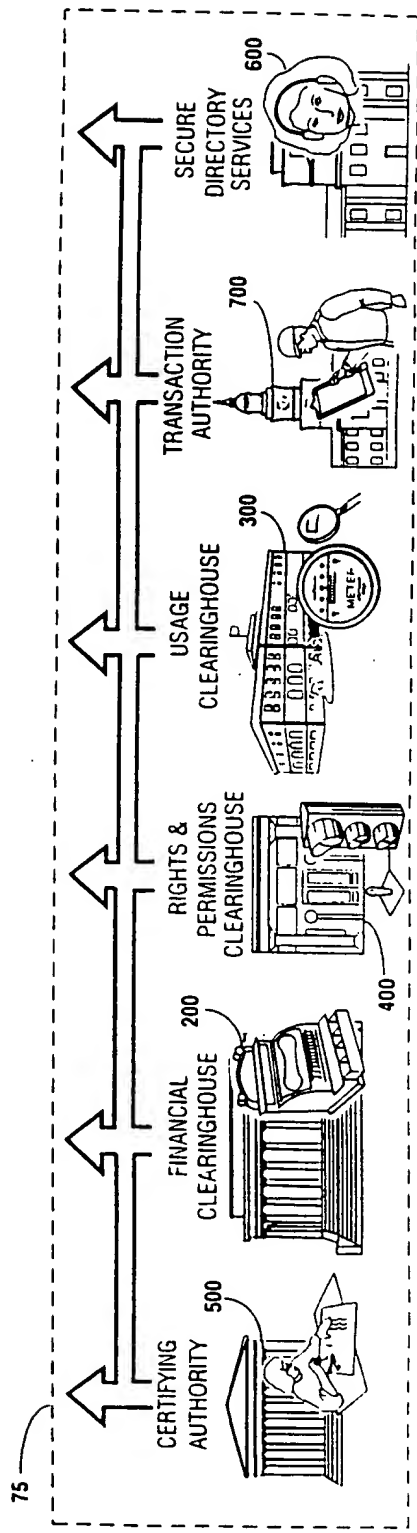
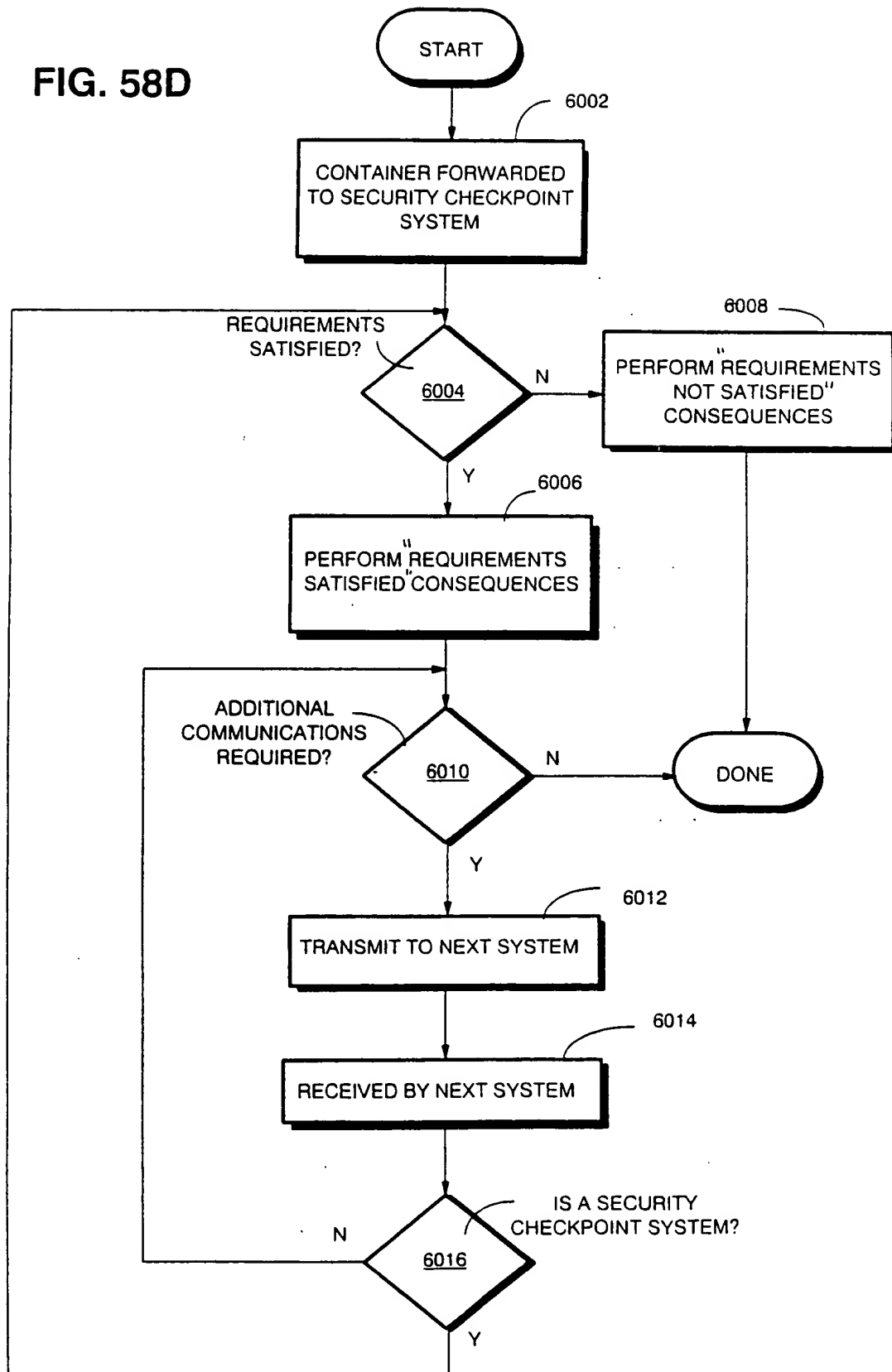
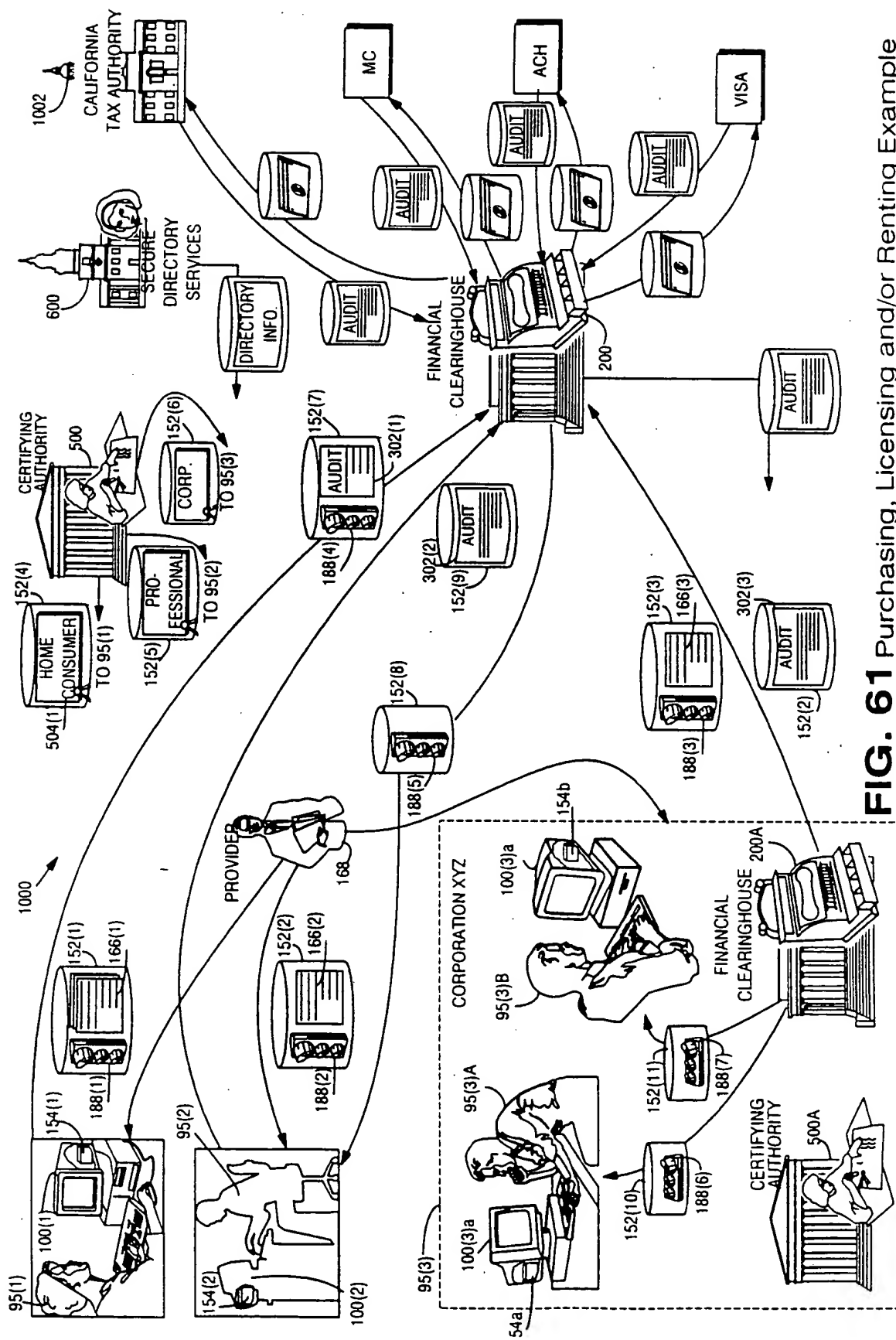
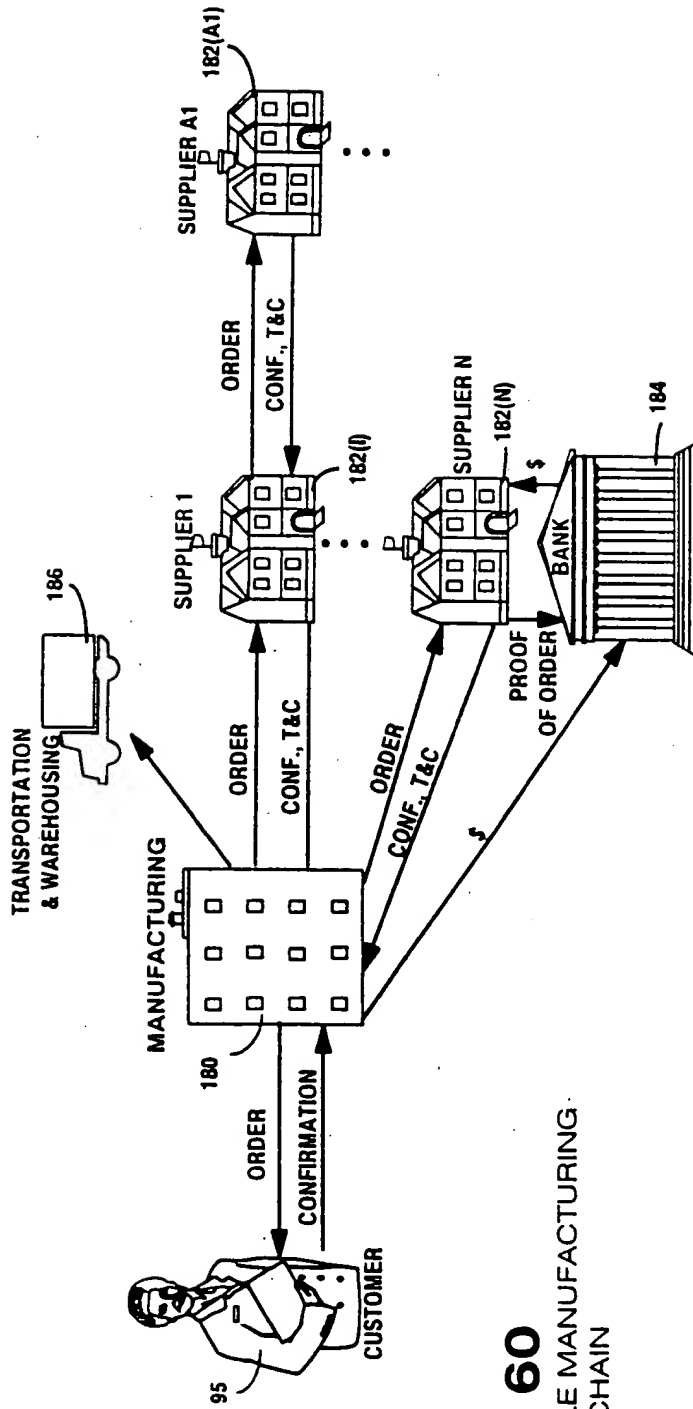


FIG. 58D

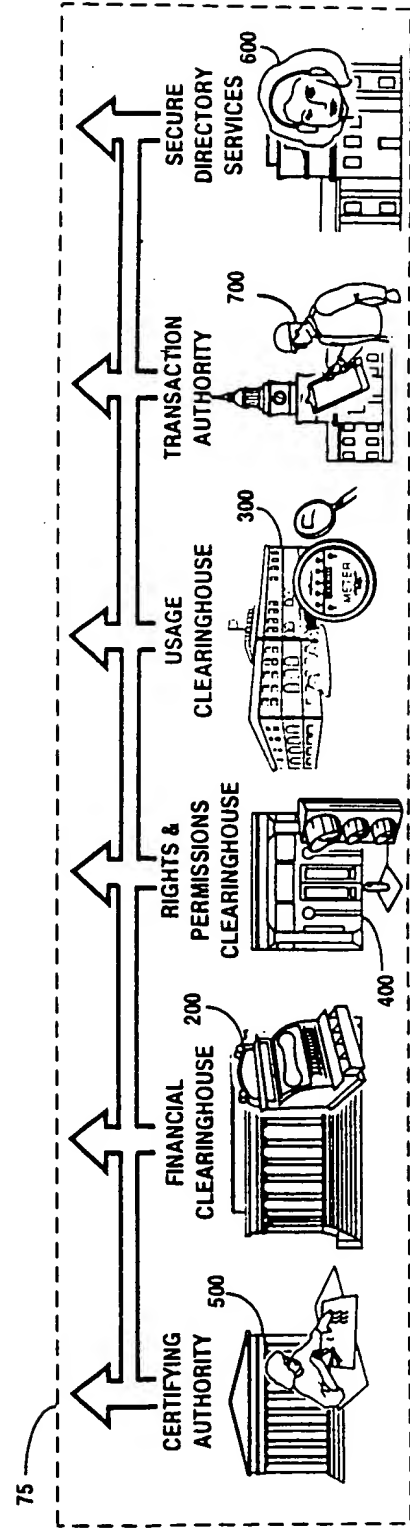




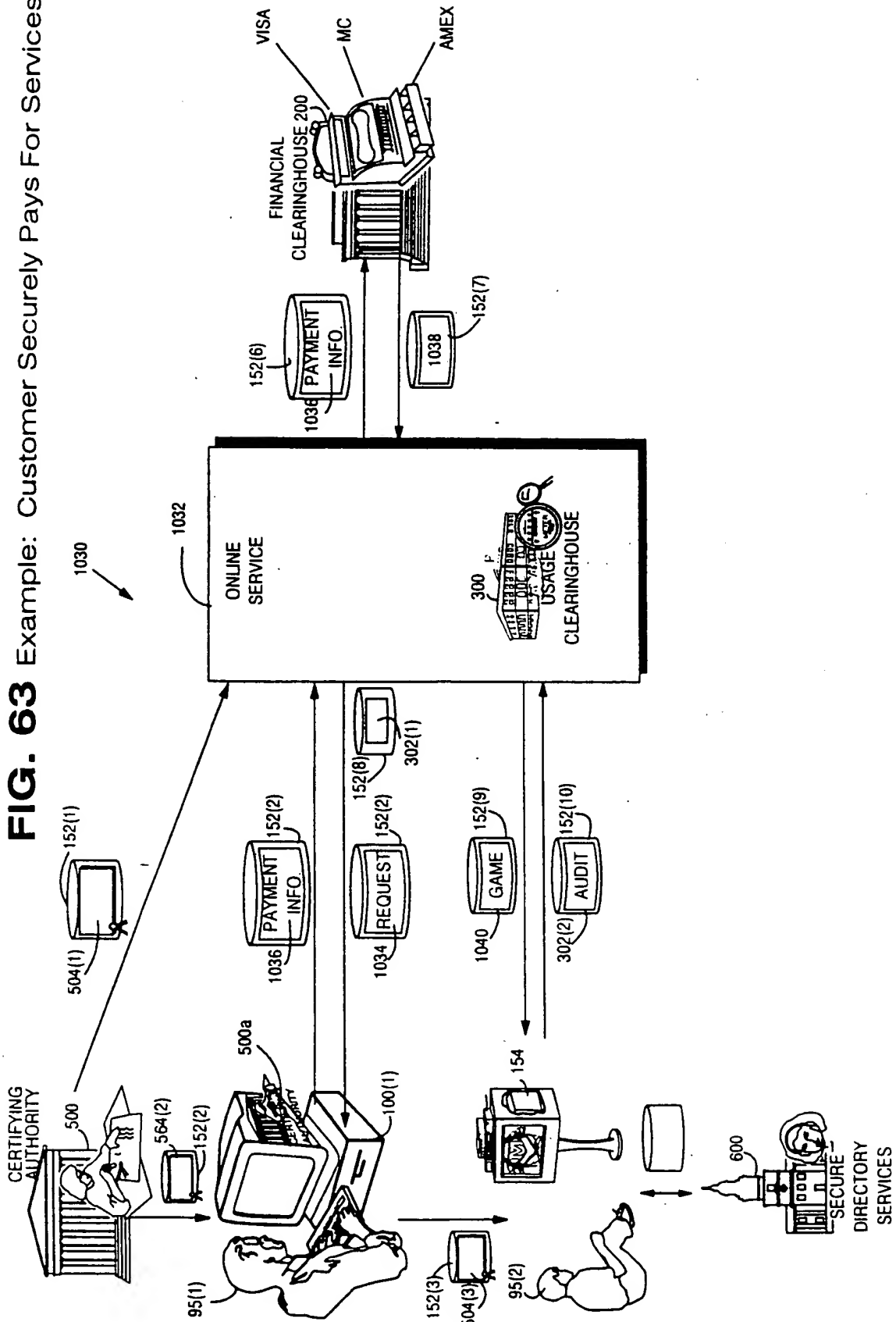
**FIG. 61** Purchasing, Licensing and/or Renting Example



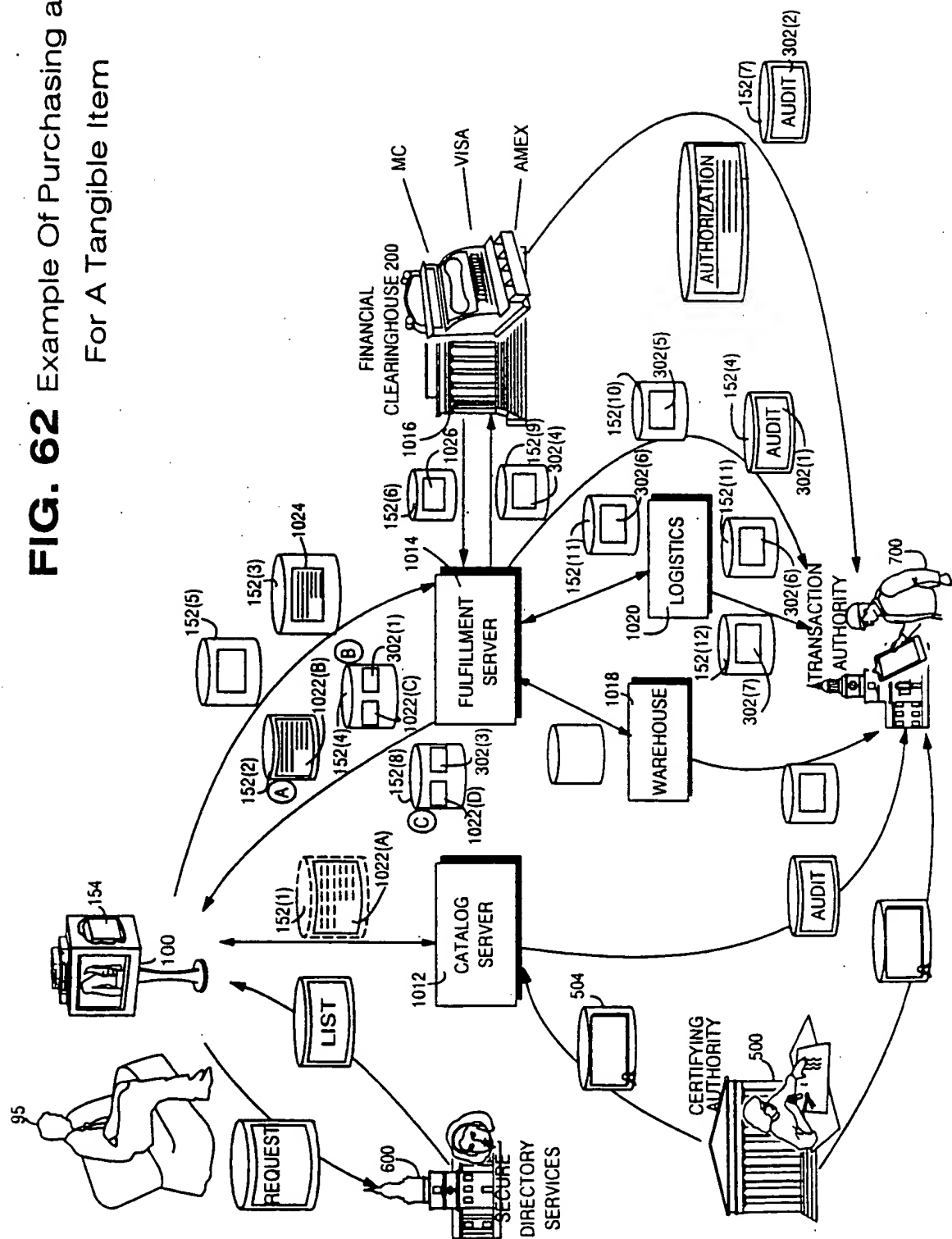
**FIG. 60**  
EXAMPLE MANUFACTURING  
VALUE CHAIN

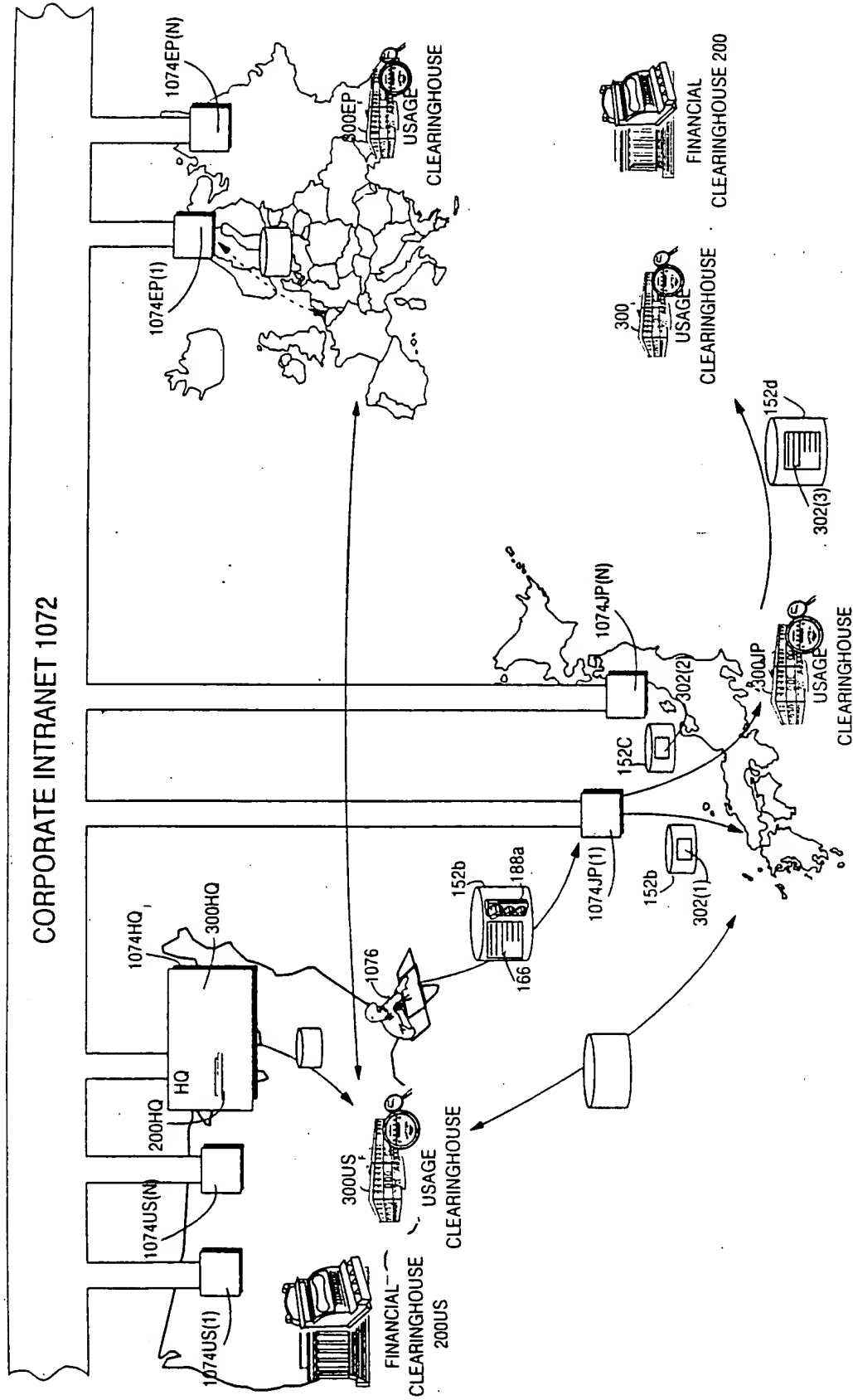


**FIG. 63** Example: Customer Securely Pays For Services



**FIG. 62** Example Of Purchasing and Paying For A Tangible Item

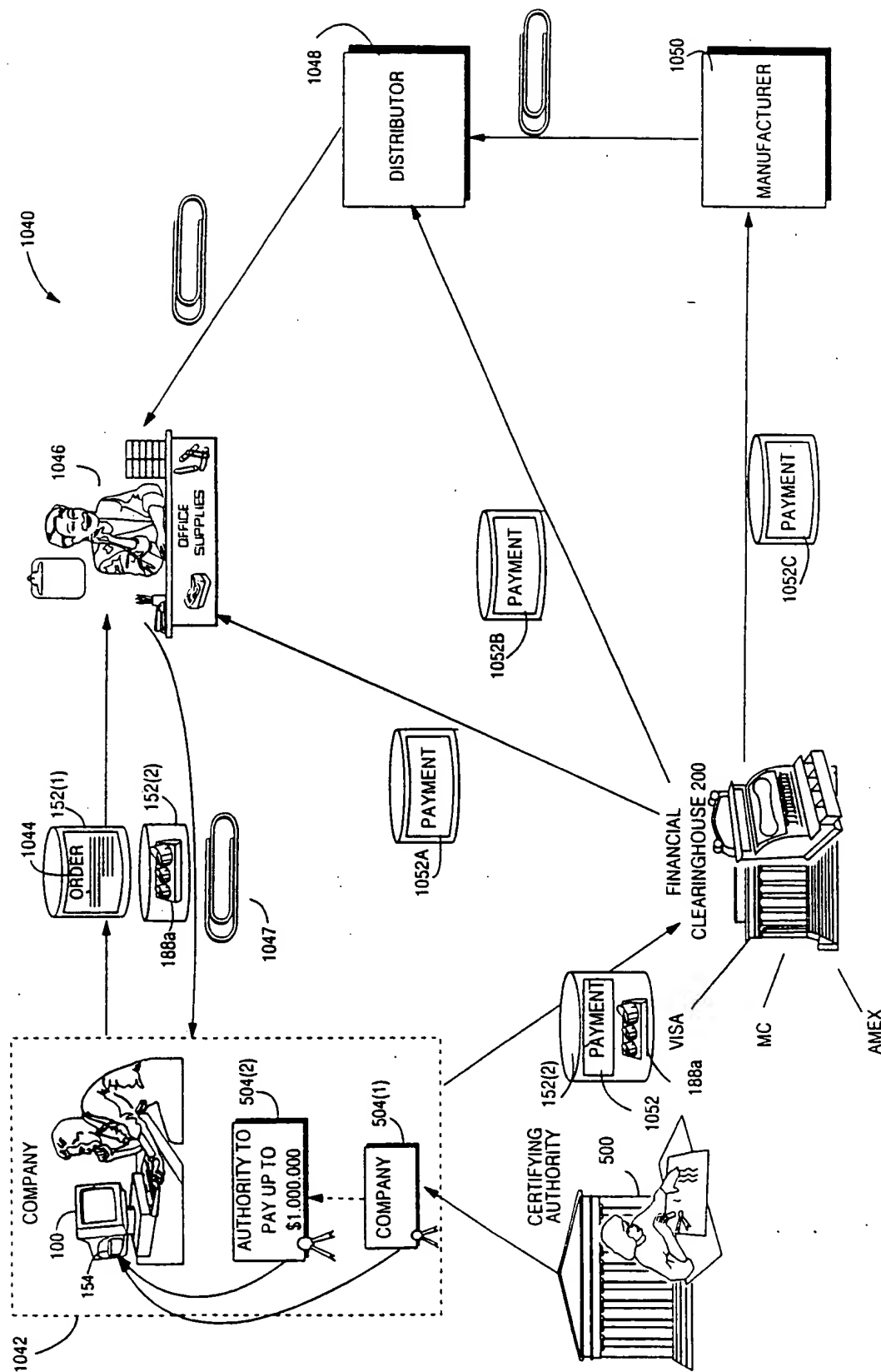


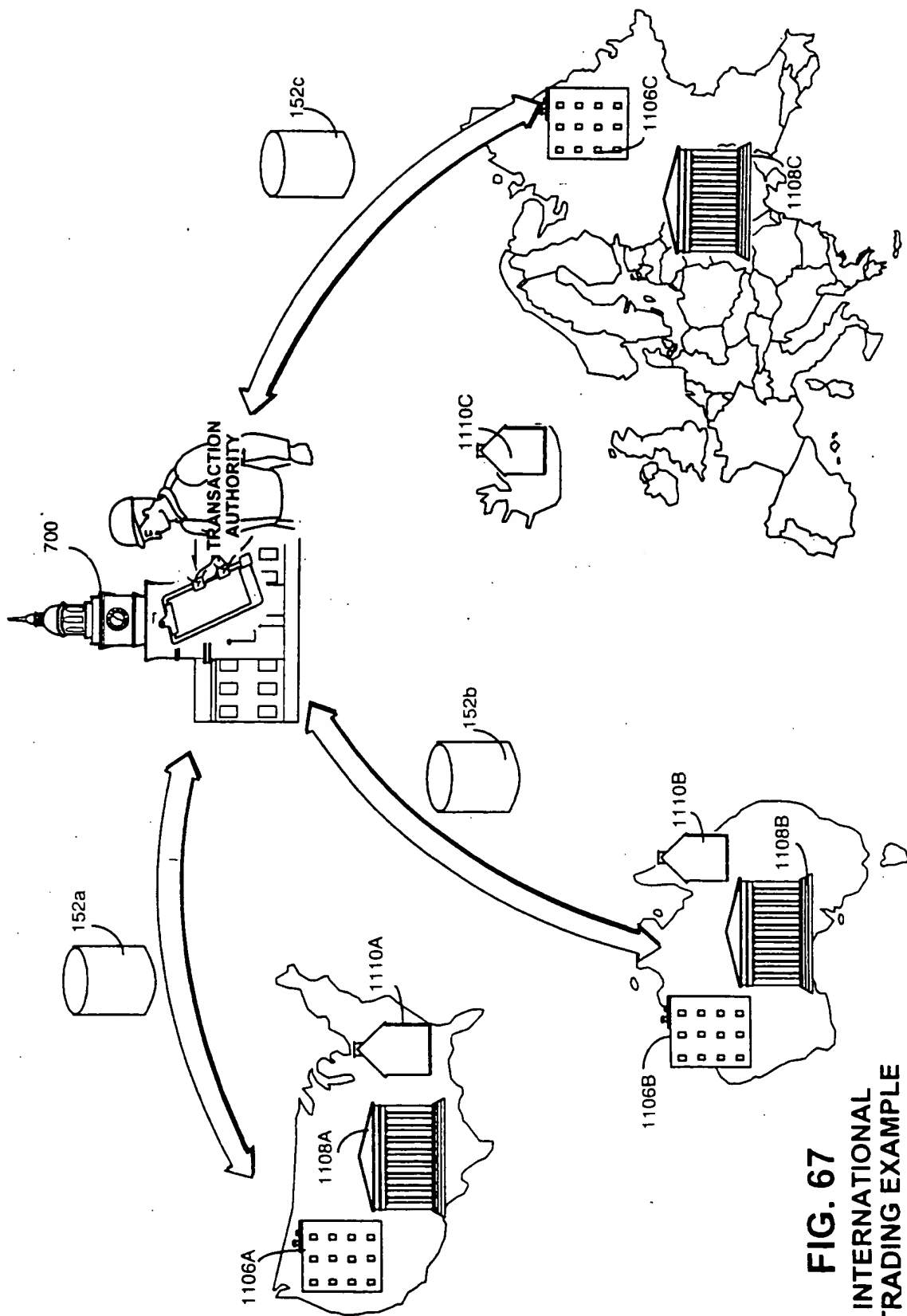


**FIG. 65** Cooperation Among Commerce Utility Systems Internal and External To An Organization

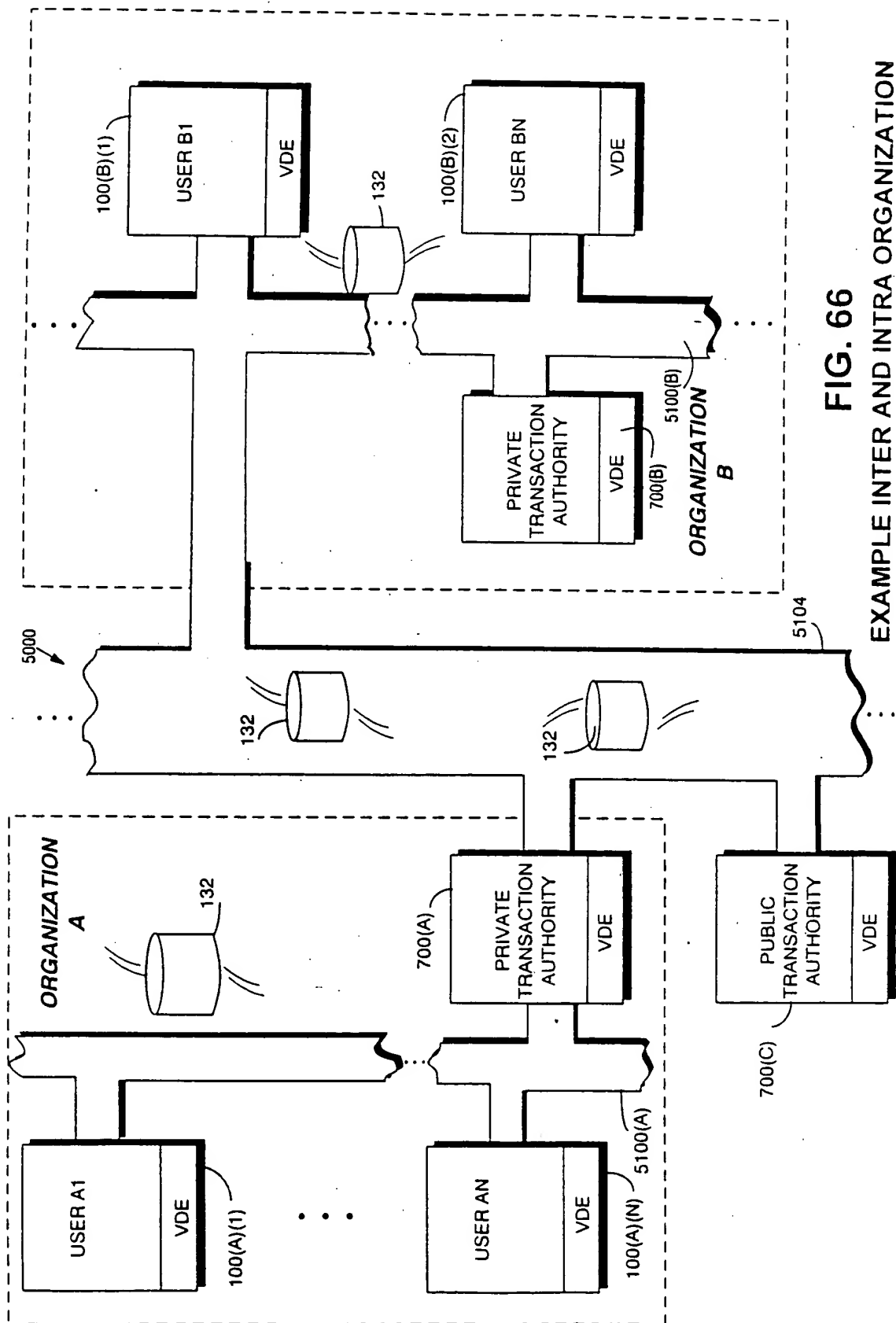


**FIG. 64** Example Value Chain Disaggregation For Purchase of Tangibles





**FIG. 67**  
**INTERNATIONAL**  
**TRADING EXAMPLE**



**FIG. 66**

**EXAMPLE INTER AND INTRA ORGANIZATION**